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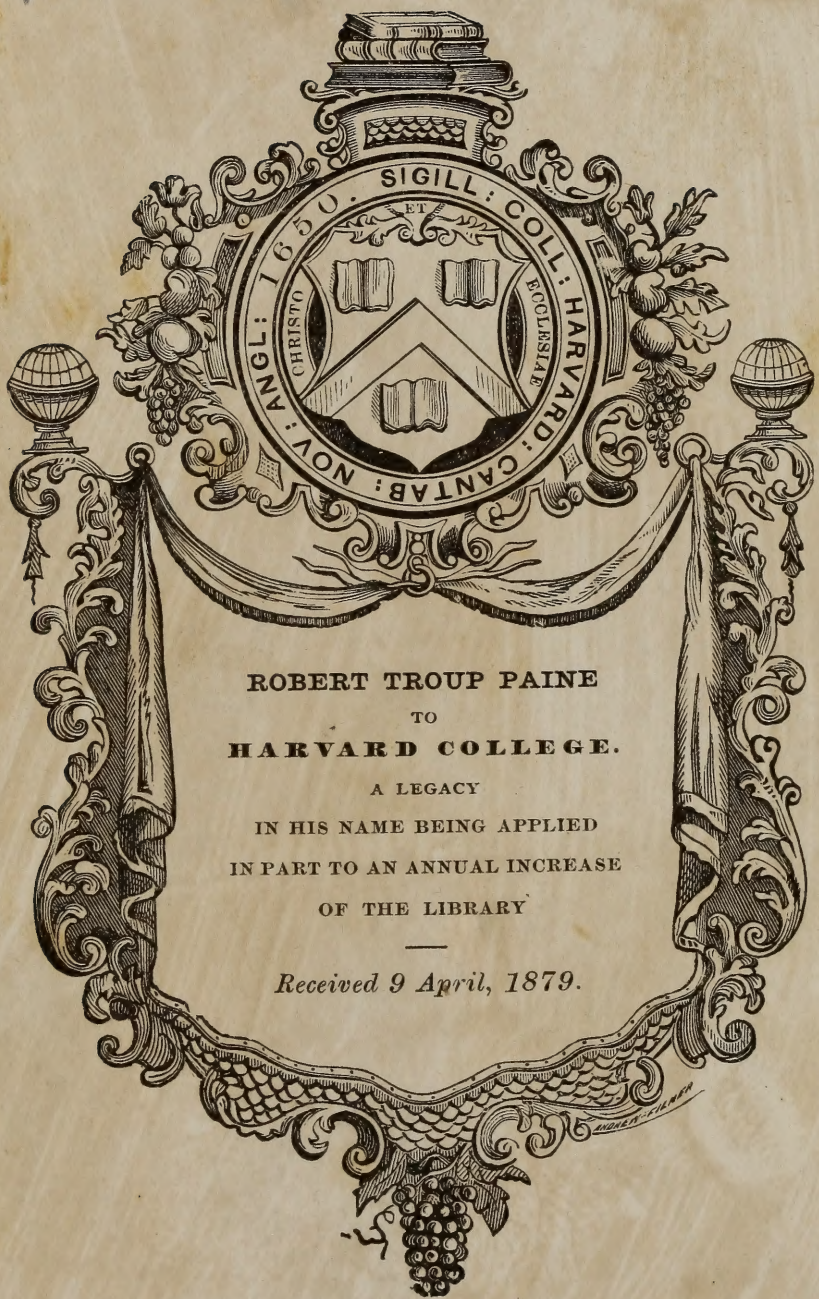

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CONDUCTED BY

Abel Lawrence Joshua Barker Elisha

A. L. PEIRSON, J. B. FLINT, AND E. BARTLETT.

Vol. I.

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

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41

CONTENTS OF VOL. I.

Page.

Abortion, artificial production of, 685
Acupuncture, . . . 309
Age, ... 425
Air, admission into the veins, 12, 279
—— bath, . . . 446
Amaurosis, ... 314
Anatomy, pathological, . 658
Anthelmintics, . . . 503
Arsenic, poisoning by, . 273
Assassination of Delpech, . 539
Associations for Medical Improvement, ... 569
Asthma united with Bronchitis, 693
Auscultation, . 68, 265, 439
Barry's Madame de, bequest of her Body, . . . 387
Bath, Vapor, ... 439
—— Air, ... 446
Bathing, luxury of, . . 617
Bell, on the Climate of St. Agustine, ... 723
Blanching, . . . 485
Blood, excessive loss of, . . 497
Boott's Life of Armstrong, . 649
Boston Lying-in Hospital, . 19
——— Society for Medical Improvement, 72, 281, 663
——— medical statistics of, 509, 576
——— cholera in, 163, 256, 298, 449
Boylston Medical Prize Questions, 98
——— " " Dissertation, 129
Bryce, C. M. D., Sketch of Medicine at Constantinople, 361
Calculus, ... 124
Case Book, Physician's, . 298
Cautions in Auscultation, . 265
——— to School Masters, 741
Children, six at one birth, . 744
Chlorine, inhaling of, in Phthisis, 128
Cholera, Report of Mass. Med. Soc. 44
——— Chemical Pathology of, 102
——— in New York, . 114
——— in Andover, Lynn, and Haverhill, . . 183
——— in Vienna, . . 211
——— in Boston, 163, 256, 293, 449
——— in Havanna, . . 668
——— Dupuytren's letter on, 184
——— Dr Ochil's Letter, 187
——— Professor Delpech's do. 188

Page.

Cholera, Cold Water in, . 319
——— Saline Injections in, 192, 254
——— Anecdote, . . . 552
Chronic enlargement of Testicle, 687
——— Hydrocephalus, . 302
Climate, . . 474, 605, 652
——— of Florence, . . 487
——— of Italy, . . 490
Clinical Observations, . . 545
Cod-Liver oil, in Impetigo Scabida, 562
Cold, ... 371
Combustion, spontaneous, . 245
Convulsions of infants, . 747
Combe on the Constitution of Man, . . 333, 389
Conferva Helminthocordon, . 622
Constipation, . . . 318
Compression in prolapsus Ani, 598
Copper detected in perspiration, 542
Cornea, ulcers on, . . 551
Craniology, . . . 562
Cretinism, ... 486
Croton Oil in Laryngitis, . 685
——— — external application of, 749
Delirium Tremens, . . 555
Diseases of the Eye, . . 28
——— of the Thorax, . 700
Dilatation of the Urethra, . 688
Dissertation on Fistula Lachrymalis, . . . 129
Dunglison's Medical Dictionary, 662
Dupuytren's Lecture on lacerations of the perineum, 623
——— Lecture on vital dilatation of the Urethra, 688
Dysentery, . . . 640
Education, Spurzheim on, 415
Emissions of Semen, nocturnal, 678
Emphysema, . . . 304
Endermic therapeutics, . 550
Epidemic in Warwick, . 449
Epilepsy, ... 323
Errors, popular, in Medicine, 325
Erysipelas, . . . 550
———, of face and head, 683
Etiolation, ... 485
Excessive loss of blood, . 497
Eye, diseases of, . . . 28
—— and Ear Infirmary, 154, 351
Flooding from irritation of Rectum, 388

Page.

Femoris Os, dislocation reduced, . . 297, 358
Ganglionary System of Nerves, 414
Gland, Thymus, ... 61
——— Parotid, ... 541
Glanders, in the human subject, 741
Glossitis, ... 205
Goose-grease, ... 262
Hereditary hæmorrhagic tendency, . . . , 553
Hæmorrhage from Leach bites, 640
Hospice de la Maternité, . 3
Hospital, Mass. Gen., 23, 93, 358, 401, 698
——— gangrene, . . . 78
Hour-glass contraction, . 697
Howe, Dr, on use of Steel Probe, 89
Hypochondriasis, ... 620
Hints to a Young Physician, 385
Homœopathy, ... 235
Human combustion, . . . 245
Hysteria, ... 678
Incontinence of urine, . 555
Infanticide, ... 695
Inflammatory Piles, . . . 638
Influenza, ... 674
Injections, saline, in Cholera, 278, 192, 254
Intelligence, . . 360, 544
Introduction, ... 1
Italian Malaria, ... 488
Iodine in scrofula, . . 53
Jackson, James, disease in Thorax, 701
——— ——— Jr, Cases of Cholera, 174
——— Charles, T. Cholera at Vienna, ... 211
Laryngitis, ... 685
Learned Societies, transactions of, 641
Leeches, preservation of, . 747
Library of Practical Medicine, 473
Lizar's Letter on Cholera, . 189
Malformation of Genital Organs, 91
Massachusetts Medical Soc. 41, 473
——— State Prison, epidemic in, . . 405
Maternité at Paris 3
Mauran's apparatus for Venous Injections, . . 278
Mental alienation, treatment of, 751
Medical Statistics of Boston, 509, 576
Medico-Legal Observations, . 695
Miner's remarks on Cholera, 157
Milk-Powders, ... 317
Mode of dressing a stump, . 550
Moss, Corsican, ... 622
Opium eating, ... 46
Os femoris, ... 297

Page.

Ophthalmia, scrofulous, . 692
Paganini, organization of, . 204
Parotid Gland, its extraction, . 541
Parturition, artificial, . 685
Pathological Anatomy, 502, 658
Pathology, chemical, of Cholera, 102
Paxton's Anatomy, . . 70
Phipp's obituary, notice of, . 231
Phrenology, ... 172
Physic and Poetry, . . 530
Poisonous changes in Bread and Meat, ... 633
Poor, condition of, in Southwark, 259
Polypharmacy, ... 21
Prolapsus Ani, . . 259, 578
Puncturation, electro, . . 632
Ranula, treatment of, . 737
Rheumatic affection of the Chest, 495
Ringworm, ... 304
Rules, Editorial, . . . 2
Salivation speedily produced, . 638
Scrofula, ... 53
Self Murder, ... 679
Sinapisms, ... 126
Sion, ... 486
Spurzheim, ... 263
——— Physiognomy, . 735
Staphyloraphy, . . . 101
Suggestions for County Societies for Med. Improvement, 569
Syphilis, ... 551
Tartar-emetic ointment, for Hooping Cough, . . 691
Tetanus, ... 758
Throat, wounds of, . . 492
Tic Douloureux, affecting the mammæ and testes, . 744
Tobacco in suppresson of Urine, 697
Transfusion successfully employed, ... 567
Treatment of Burns, . . 556
Trephine in Epilepsy, . 552
True mode of improving Human Condition, . . 600
Tumours, ... 568
Turning, obstetric, . . 305
Ulcers of the Legs, . . 686
——— of the Cornea, . . 551
Urine, suppression of, . 697
——— retention of, . . 566
Urinary Organs, malformation, 91
Uteri Emphysema, . . 233
Vaccination, ... 108
Variola, ... 463
Varioloid, ... ib.
Vaccine, ... ib.
Veracity of Cholera contagionists, 677

MEDICAL MAGAZINE.

VOL. I. JULY, 1832. NO. I.

All introductions, whether personal or epistolary, should be brief. How awkward and distressing it is to stand up before a stranger, with the body advanced almost on tiptoe, the hand extended, and the countenance thrown into the most prepossessing aspect we can assume, but which the undisciplined muscles threaten every moment to disturb, while a kind friend undertakes to make you acquainted in a long discourse, comprising among other things, a pretty circumstantial account of your birth, parentage and geneology, of the distance and delightfulness of your home, the objects of your visit, and the incidents of your journey, adding perhaps, to your utter confusion, if you are so unfortunate as to be modest, some very complimentary things of your person or accomplishments.

We have often seen books, which, if they were sentient beings, must experience a similar mortification while their readers are laboring through a long disquisition about matters and things of no general interest whatever, which their too solicitous author has prefixed by way of *introduction.*

The Editors of the Magazine therefore forbear to encumber their first pages with the usual editorial salutations, entreaties, and promises; but commit this little pamphlet to the ingenuous community among whom it is to circulate, with entire confidence

that it will secure its share of favor and patronage while it continues to be active in the pursuit and diffusion of Medical Science, and true to the interests and honor of the Medical Profession, to the members of which throughout the country it is, with fraternal greetings, respectfully dedicated by,

ABEL L. PEIRSON,
JOSHUA B. FLINT,
ELISHA BARTLETT,
Editors.

Boston, July 15th, 1832.

EDITORIAL RULES.

1. All communications for the Magazine to which the name of the author is attached, are to rest on the sole responsibility of the authors, and the editors are not to be made accountable for the facts or opinions expressed therein.

2. All personal controversies and disputes, whether between individuals or members, tending in view of the conduct of either party to degrade the character of the profession, shall be refused, as there are other and more appropriate channels for bringing such disputes into public notice.

3. Articles published under the signature E. may be assumed to rest upon the authority of one or more of the Editors.

4. It is sometimes extremely desirable to condense the statements of cases and accounts of dissections; and the editors will assume the power to do this, where the propriety of it is fully obvious to them, unless when the author of the communication expressly prohibits it.

5. When a communication is rejected the author shall be notified, and his communication returned if desired.

Art. I. — Hospice de la Maternité, at Paris.

The materials from which this article is mostly made up were collected some five or six years ago, during the writer's residence in Paris. I am not aware, however, that any essential changes have since taken place in the general character and management of this institution, and the account here given is, probably, still applicable in all its main features to the actual situation of the establishment. Preeminent as the city of Paris is for the extent and excellence of its numerous scientific and benevolent institutions, there is no one amongst them more worthy our admiration or better calculated to awaken and gratify our interest, than that here spoken of. Although we may indeed sigh over the state of morals of which the history of this hospital is the melancholy but magnificent index, still, so long as there exists the necessity of its institution, we cannot but esteem and venerate the motives both of the government and the individuals who have so nobly fulfilled the purposes of its establishment. As there has not been, so far as I know, any full and accurate history of the Maternité published in this country, I hope the following sketch will not be thought unnecessarily prolix or detailed.

The germ of this institution may be traced back as far as the year 1638. The protection and support of infants abandoned by their parents, had been, during a long period previous to this era, to a certain limited extent, a subject of interest and attention to the French as well as most other civilized governments. During the above year, a charitable widow of Paris, opened a private establishment for the reception of foundlings, where they were nursed and taken care of at her own expense. From various causes the benevolent lady was soon forced to abandon her project. The number of applicants was greater than she could accommodate, while the nurses not only neglected their duties but scandalously abused their trust. They made the children an article of commerce, selling them to mendicants, who bought them for the purpose of deceiving and exciting the commiseration of the public. They were also sold to families destitute of children or to replace such as had died.

In 1640, *Vincent de Paule* collected 312 deserted children, called together an assembly of opulent and charitable women who were interested in the subject, and instituted the Order of the Sisters of Charity, to whom was confided the care of the in

fants. Such was the origin of this celebrated Sisterhood, almost the only Order which has outlived the storms of religious and political revolutions. One of the most interesting spectacles to a stranger visiting the *Hotel Dieu* and many others of the great European hospitals, is the presence of the members of this society, dressed in their peculiarly neat and appropriate costume, moving about among the sick and wounded like ministering spirits of good. The enterprise of Vincent de Paule and his associates was approved and patronised by the King, and the chateau of Bicetre was assigned for the reception of the children. They were soon, however, removed to the faubourg of *Saint Lazarus*, and thence to the *Place Notre Dame*. The management of the hospital was conducted on the same general principles as at present, from the time of its establishment to the year 1793. During this period of 153 consecutive years, 405,474 infants were admitted.

In 1793, the nurses finding themselves unable to support the children committed to their care on account of the worthless paper currency of the time, refused any longer to receive them, and the foundling hospital was at once converted into a sepulchre, whose unfortunate inmates were continually perishing, victims to the artificial diet necessarily substituted for their natural food. The same revolutionary excesses which had produced these evils, removed at the same time those persons on whose zeal, experience and paternal care the success and prosperity of the establishment so much depended. It was during this disastrous period, that *M. B. Hombron*, who had been for nearly forty years one of the chief officers of the hospital, conceived the idea of admitting pregnant women into the establishment, and employing them after delivery as nurses not only for their own children, but for those received from without. Among the depositaries of popular power were still found some men whose hearts were not yet utterly steeled to the cries of suffering humanity, and to these individuals *M. Hombron* submitted his plan. In 1794, a decree of the *National Convention* sanctioned the project, and the institution established by the same act, received the appellation of *Hospice de la Maternité*. The old building in the *Place Notre Dame* was abandoned, and the ancient convent of *Val-de-Grace* was prepared for the accommodation both of the foundlings and pregnant women. Soon after this a new decree of the Convention made of the Val-de-Grace a military hospital, and ordered the children of the Maternity to be transferred to the convent of

Port-Royal, rue de la Bourbe, and the women to the *Oratoire*, rue d'Enfer. Although the two establishments were thus separated, they were conducted by a common administration, under a common name, until 1814, when they were made distinct establishments independent of each other in their management and destination. Having finished this brief and general sketch, I shall now proceed with the account of one division of the old *Maternity* — the *Hospice des Enfans Trouvés*, or *Foundling Hospital.*

All children, under two years of age, that are presented, are indiscriminately received, and carried by the portress to the office of reception. Accompanying some of them is a record of their birth and parentage, others are furnished with notes more or less circumstantial, containing, usually, only a christian name, while many are left without any information respecting them. Children over two years old are sometimes left at the door of the hospital. These after remaining twentyfour hours are transmitted to some other establishment, destined to receive them according to their age and sex, generally to the orphan asylum. As soon as the child is delivered at the office of reception, its sex, record of birth, name, &c, are recorded in a verbal process by an Overseer, and afterwards copied in the register of reception. Where there is no accompanying information, the same officer bestows on the infant a name and surname, and carefully states, in the verbal process, the precise hour when it was left and the clothes with which it was covered. They are all inscribed in numerical order on the register of reception, with a description of their dress, of all peculiarities or deformities of person, together with every circumstance which may be necessary for their future recognition. There is then attached to the neck and also to the arm, a piece of parchment, upon which are inscribed the name, date of birth and reception, &c. after which the infant is transmitted to the *créche.*

The *créche* is the name given to the room or rooms in which the cradles are situated. These to the number of more than one hundred, are each furnished with a small mattress, pillow, &c, arranged in uniform lines, and covered with white linen. A certain number of females, called *berceuses*, or cradle attendants, are commissioned by the superintendant of the *créche* to take care of the infants in this situation. Before the children are placed in the cradles, they are undressed, washed, weighed, and then dressed in the child-bed linen of the estab-

lishment. An exact record is kept of their weight and this is usually found to be an index of their viability. Every morning the children which have been received during the previous day, are carried each one by its cradle attendant to the church for the purpose of baptism. The sacristan officiates as a sponsor and the attendant as God-Mother. After this ceremony they are visited by the surgeon, the sick are sent to the Infirmary, the well are designated to be delivered to the country nurses, and such as do not seem able to support the fatigues of a journey are put under the care of nurses residing in the hospital.

On certain fixed days of each week the carriers in the regular employ of the establishment arrive with nurses from the neighboring country. They are required to furnish the most satisfactory testimonials of their habitual neatness, moral character, &c, and the day after their arrival they are visited by the surgeon to ascertain the quality of their milk.

When the nurses with the children leave the hospital for their respective places of residence, each one receives a ticket, of which the following blank is a specimen. This ticket they preserve during the whole time of their employment.

(1)
A——— B———, Carrier of Nurses.

(2)
Infant of ——— sex, confided to the care of ———.

(3)
Born —— the — day of ——, 18—.
Received — the — day of —, 18—.
Register of reception No. —.
Aged — years, — months.

(4)
Amount paid on the day of departure.
To the Carrier, — francs.
Journey of the nurse, — do.
First month, — do.
Premium to nurses who arrived between Aug. and Jan. — do.

(5)
Register of the different articles of dress, with the dates of their delivery to the nurses.

(6)
First nurse — C—— D——,
Age of milk — months.

(7)
Wife of ———,
of the commune of ———,
department of ———,
post of ———.

(8)
Change of Nurse.

(9)
Certificate of Death.
I, the subscriber, Mayor of the commune of ———, department of ———, post of ———, certify that ——— infant of the Hospice des Enfans Trouvés, is dead, in the hands of —— ——, this — day of ——, A. D. 18—.
Signed, ——— ———.

At the head of the bill fig. 1, is placed the name of the carrier. Fig. 2. The sex of the child and the date of its delivery to the nurse. Fig. 3. The name and surname of the child, its age, number of registration and the date of reception. Fig. 4. The carrier receives for the transportation of each infant, 3 francs for a distance less than 30 miles; from 30 to 48 miles, 4 francs; from 48 to 73 miles 5 francs, and so on, in about the same proportion for additional distances. The nurse is paid for the expenses of the journey, the same amount for the different distances as is received by the carrier. A small premium is paid to nurses between August and January in order to avoid as much as possible any interruption in their arrival during the harvest and winter months. The sum of 7 francs for the first month is paid in advance. Figs. 5 and 6 and 8 are explained in the certificate. Fig. 7. The names of the nurse, her husband and their place of residence. Fig. 9. In case of the infant's death the nurse presents the ticket to the mayor of the commune, who fills the blank certificate. Some further account of the expenses of the hospital will be given in another part of this paper.

It not unfrequently happens that persons of fortune apply for children which they wish to adopt and educate. The administration uses great caution in the grant of these requests; children being sometimes obtained in this manner for the purpose of replacing legitimate children, deceased, and in order also wrongfully to intercept the just successions and inheritances of estates. If the individuals making such application are married, they are required to produce a declaration, made before a notary, of the consent of both husband and wife, and a certificate from the mayor of their commune attesting the rectitude of their morals and their means of supporting and educating the child. The children thus confided to individuals are still vigilantly protected by the administration of the hospital. The following instance is related in the memoir from which most of these materials are drawn. "An honest and industrious artizan, a good husband and a man of excellent character, had obtained a child from the hospital, which had been left there at the age of two years. During six months it had received the most assiduous attention and the tenderest cares; it had become the child of its new protectors who had now given themselves up to the sweetest illusion of nature. A man presented himself, one day, to hire a vacant room at the head of their staircase; the terms were arranged and he took posses-

sion of his chamber the same evening, a miserable bed, procured by himself, constituting its whole furniture. The next day the wife of the artizan was descending the stairs with the infant in her arms; she was met by the stranger, who, fixing his eyes on the boy exclaimed, 'That child is mine!' 'Indeed, sir, you are mistaken, it is mine,' replied the adoptive mother, alarmed at the threatened loss of her charge. The man insisted upon his rights; he called the boy by his name and was answered with a smile. The child was truly his own, and he claimed its restitution to himself. The administration being informed of the circumstance refused to render him up his son unless he should procure satisfactory evidence of his good morals and character. Not being able to comply with these conditions, he abandoned his temporary domicile and the child was left to the better care of its new parents."

The daily attention which the carriers are required to bestow on the children in the hands of the nurses, not being considered sufficient to secure their proper treatment, two inspectors are appointed whose sole business it is to visit the nurses employed by the hospitals. This duty was formerly fulfilled by the Sisters of Charity. These inspectors, each in his appropriate department, commence their journey on the first of April, and finish them by the close of December. They are careful that the nurses shall not be informed of the time of their expected arrival, and by the vigilant watch which they are thus enabled to maintain, all abuses and negligences are detected and remedied.

The children abandoned to the care of the hospital may be afterwards reclaimed by their parents or natural guardians. It sometimes happens that the father of a family, suddenly assailed by misfortune and reduced from easy circumstances to poverty, places his infant in charge of the institution. But in order to prevent, as far as possible, the abuses which might grow out of this indulgence, parents applying for the restitution of their children, are required by the administration to comply with the following conditions. No information whatever is given in relation either to the existence or situation of the child except on condition that the applicant deposites thirty francs at *the office* of *research.* If the child is found to be dead, twenty francs are returned. If, on the contrary, the child is living, the sum deposited is retained and charged towards the expense of its education. This sum has reference only to the life or death of the child, no knowledge being given of its situation. Every

nurse or carrier, or any one else in the service of the hospital, who is convicted of having given any information to parents relative to their children, are immediately dismissed. If the child is found to be living, the parent, before receiving it, is required to pay the whole amount which has been expended upon it up to the time of its delivery. In many cases when this sum is large, a considerable reduction is made by the administration. The parents are further required to present a certificate of their morality and of their ability to support and educate the child, signed by the mayor of the commune in which they reside. It has already been stated that the nurses are paid in advance the wages of one month, when they leave the hospital. They are then paid seven francs per month for the first year, six francs per month for the second, and five francs per month during the third, fourth, fifth, sixth and seventh years. From this last to the age of twelve years, the children are boarded at the rate of 48 francs per year. There is also given to each nurse who receives a new born infant, a gratuity of eight francs at the end of the third month, and two of six francs each at the end of the sixth and ninth month of the same year. The object of this recompense is to induce the nurses to bestow all possible care upon the infants during the first and most dangerous period of their existence. These payments are made quarterly. When the children have attained their thirteenth year they receive the sum of fifty francs, and are no longer supported at the expense of the hospital. They then come under the direction of other officers of the establishment, whose duty it is to procure them suitable places as apprentices to farmers, manufacturers, mechanics, &c.

A few statistical facts, obtained from the records of this hospital, will serve better than anything else to show the magnitude of its operations. There were in the hospital on the first of January, 1824, 159 children; there were then in the country 13,639; received during the year 5,506, making the whole number for the year, 19,304. Of these, during the year, 102 were sent to the hospitals for various diseases, 215 were returned to their parents, 945 were placed in boarding houses, 142 were returned by the nurses, and two were unaccounted for or lost. The number of deaths was 1203 at the hospital and 2,338 in the country, thus leaving on the thirty-first of December, 159 in the hospital and 14,199 in the country. From 1640 to 1700, a period of sixty years, there were received at the hospital 51,600 infants, at the rate, in

round numbers, of 860 per year. From 1700 to 1800 the number amounted to 382,431, at the rate of 3,824 per year during the entire century. If we now put the number received at 5,000 per year for the first thirty years of the present century, the number of infants received at the hospital since its foundation by *Vincent de Paule*, in 1640, will amount to 584,075! The expenses of the establishment in 1824, amounted to 1,583,494 francs, or, in round numbers, to upwards of $300,000. The average annual expense of each child is about 82 francs.

It will not be considered foreign to the purpose of this article, before closing it, to speak of a pathological alteration peculiar to new born children; — a disease of which little has been said by modern English or by American writers, and for our knowledge of which we are mostly indebted to the medical men of the Paris Foundling Hospital. We allude to the *induration or hardening of the cellular tissue.* New born infants have, probably, always been subject to this affection, though no mention is made of it in the writings of the ancient physicians. We believe it has no place in Good's System of Nosology, although it is described by several writers to whom this paragon of compilers must have had easy access, and among others by Denman and Underwood. According to the observations of late French, German and Italian writers, the disease is usually found from the time of birth to the eighth or ninth day, and not often at any later period of life. Infants that are feeble, imperfectly developed, or prematurely born, are more liable to it than those under the opposite conditions. A refusal to take the breast, moaning cries of a peculiar character, an agitation not amounting to convulsive movements, dryness and coldness of the skin, particularly on the parts to be affected, are the principal premonitory signs of the disease. The hardening most frequently commences in the lower extremities, though it often first affects the arms and cheeks, extending in bad cases rapidly to the chest and abdomen. The swelling and induration are always greatest in the extremities, affecting especially the external parts of the legs, so that at first sight they seem to be bent or fractured. The skin covering the hardened portions is of a light rose color, purple, violet or livid. When pressed with the end of the finger the red color disappears, leaving constantly a yellow tinge, more or less deep. The function of calorification seems to be destroyed, the temperature of the entire body rises or falls like that of an inert

mass, and the circulation is carried on with extreme feebleness. The cries of the child now become weaker, the coldness, rigidity and induration of the limbs increase. The same phenomena, though carried to a minor degree of intensity, extend to the trunk; the respiration, already embarrassed, becomes more and more difficult; the cries cease, the face is livid, the pulse imperceptible, and the little patient dies, apparently suffocated, generally between the first and third day from the invasion of the disease. When the disease is susceptible of cure, it is hardly necessary to say that the above train of symptoms are present in a much milder degree. The hardness of the cellular tissue gradually diminishes and finally disappears. These favorable changes take place from the fourth to the eighth day of the disease, but they are extremely rare; the great majority of cases, at least in the Paris hospitals, where they have been the most extensively and accurately observed, proving fatal.

Examinations after death exhibit the cutaneous cellular tissue of the parts affected very dense, and engorged with a reddish or yellowish serosity, coagulating readily as it escapes. The depending portion of the lungs have always more or less of the character of inflammatory hepatization. But the most important pathological alteration, and the one which may be considered as the primary causes of all the others, is found in the composition of the blood. The serum of this fluid, like that exuding from the cut surfaces of the cellular tissue, has a remarkable tendency to become concrete, promptly moulding itself to the form of the vessels in which it is received. It contains also a large quantity of yellowish green coloring matter. The right cavities of the heart and large veins are loaded with the circulating fluid, where it frequently forms gelatinous concretions. In addition to the foregoing uniform lesions, some others, less constant, have been noticed. Among these, according to M. Leger, is the imperfect development of the intestinal canal. He says that this tube is three feet shorter in children dying with this disease than in others. There is also sero-gelatinous infiltration of the glottis and epiglottis. The physiological physicians refer the disease to an inflammatory condition of the gastro-intestinal mucous surface. This membrane is frequently found thickened, softened or engorged with blood.

From the more frequent occurrence of the affection during the winter months, some writers have attributed it to the action of external cold. But apart from other objections to this opin-

ion, the disease occurs at all seasons, and M. Leger states in an inaugural dissertation on this subject, that of forty four deaths at the Hospital des Enfans Trouvés during the month of June, 1823, twenty one were occasioned by the hardening of the cellular tissue.

The treatment of this affection has been attended with but little success. The obvious indications seem to be to maintain the body at a suitable temperature, and to correct the morbid condition of the blood. The first indication is easily fulfilled, but, unfortunately, we have but little control over the latter. The warm bath, fomentations and frictions have been most relied on. Palletta, an Italian physician, pretends to have been very successful by applying leeches to the legs, prescribing at the same time the use of the warm bath. Sinapisms and blisters have also been made use of.

Such are some of the principal facts in relation to this singular disease. It would seem to depend generally for its remote causes on some depraved condition of the maternal system, since it so frequently attacks the children of the lower classes of the population in the large European cities. We have seen the disease in this country, but how common it may be we know not, we shall be glad to receive any observations respecting it made by American physicians.

Lowell, June 1, 1832.

Art. II. — Admission of Air into the Veins.

Two Cases of Accidents, from Admission of Air into the Veins during Surgical Operations: — By John C. Warren, M. D., *Professor of Anatomy and Surgery in Harvard University.*

Some professional men have expressed doubts as to the accidental admission of air into the veins during surgical operations. Such doubts appeared well founded when the occurrence first attracted the attention of surgeons; especially on considering that veins about the neck were so very often wounded in the removal of tumours; and that some of them, as the external jugular, are frequently opened for the purpose of taking blood, without any unfavorable consequences.

Not long since I had evidence of the existence of such cases in two of my own patients within no great distance of time from

each other. — The certainty of such accidents and the possibility of their frequent occurrence, have led me to consider it a matter of duty to state them publicly, for the satisfaction and government of other surgeons. It seems to me remarkable, that nothing of the kind before occurred in my own practice ; nor in that of my father and predecessor in a long and active surgical career.

Case. I. — Mr William Burrill, of Salem, aged 60, was admitted into the Massachusetts General Hospital on the 16th Oct. 1830. — He had a cancerous affection of the left side of the face and neck of the extent of three or four inches diameter. It was hard at the edges — of a livid red color, — ulcerated in the centre — very offensive — very painful — and had made an impression on the general health. The parotid gland, the submaxillary, the sublingual and all the textures excepting the bone were involved in the complaint — The lower jaw itself was thought to be diseased at first, but it afterwards appeared that it was not so. — In so bad a state of things, I felt very little hope of being able to eradicate the disease ; and would not have attempted any operation, had not the patient solicited it.

Considering the extent of the disease ; that important blood vessels would be divided, namely the facial and sublingual arteries, probably the temporal and even the external carotid ; I thought it best to begin by securing the carotid trunk. An incision for this purpose was begun opposite the thyroid cartilage and carried two inches, downwards. The platysma muscle was divided ; the edge of the mastoid exposed and dissected. Thus far, only a few drops of blood were discharged. The face of the sheath of the great vessels was a little uncovered, when a small effusion of venous blood appeared under the knife, and checked the operation. At that instant a very distinct sound was heard — like the passage of air through water. A few bubbles were seen in the venous blood, the flow of which was immediately arrested by applying a finger on the part. — The patient exclaimed, " I am faint." On regarding his countenance, it was not pale, but livid, almost black, and the muscles agitated by a convulsive motion. The respiration became deep, labored, and stertorous like that of apoplexy. — Committing the compression of the vein to Dr Hayward, who assisted me, I examined the pulse at the wrist ; found it distinct, but very slow. The wound not bleeding, and very little

blood having been lost, I directly opened the temporal artery, and the blood poured from it with great freedom. As it flowed the respiration became more frequent and less laborious — the pulse at the wrist more natural. The leaden color in the cheeks assumed a reddish tinge; and the alarming character of the symptoms was evidently diminished. About twenty minutes elasped during these changes. At the end of half an hour I judged it safe to remove the patient to his bed, where he lay in a state of insensibility for two hours; at the expiration of which he awaked as from sleep, still breathing like an apoplectic. The night was passed without any accident, and on the following morning he was as well as usual, with the exception of a moderate soreness over the thorax, and a headache.

In seven days after the accident described above, the operation was performed without tying the carotid artery.

The diseased parts were included in an elliptical incision, extended from the lobe of the ear to the upper part of the neck, and including the submaxillary, the sublingual and parotid glands — all of them in a morbid and disorganized state. The os maxillare inferius was not diseased. The hemorrhage was copious; but readily arrested, with the exception of that from a large vein, which from its depth, under the jaw, could not be distinguished so as to admit the application of a ligature, and was therefore compressed by a sponge. The veins below the wound were compressed by Dr Hayward during this operation. The patient experienced a slight faintness, which soon passed off. He had no bad symptoms, and on the 10th of December the wound being nearly healed, he requested his discharge which was granted.

Case II.—Nancy Bunker, of Trenton, in Maine, married, her age 33. — Three years since she noticed a hardness in the right breast, which increased till it involved the whole gland in a tumour, very hard, moveable, yet obviously connected with the pectoral muscle by a morbid adhesion. The nipple is drawn in. The axilla is occupied by a considerable tumour of a globular form, and quite hard. The disease has been accompanied during the last year with very constant lancinating pains. The patient is desirous of an operation: has a strong conviction that she shall not recover: yet is perfectly tranquil and resigned.

On a careful examination of the tumour, it seemed that the whole of the diseased parts could be removed; and it being, thought that the patient would thus have a chance for life, and

that if the disease reappeared her sufferings would be less than if the gland were allowed to remain, the operation was performed on the 24th December, 1831.

The patient sat in a chair. The right arm was extended, raised above a horizontal line, in order to give tension to the skin, and permit access to the armpit — and was supported in this position by an assistant. The skin on the surface of the breast, with the diseased nipple, were included in an oval incision — the breast was dissected from the pectoral muscle and left connected with the axillary glands while the extirpation of these glands was effected. As they adhered to the great axillary vessels they were cautiously detached by dissection, and by insinuating the finger where the cellular substance was loose, between the tumour and the great vein. This separation was nearly effected — only a slight connexion still existing at either extremity of the tumour. Proceeding to separate it, at the outer part of the axilla, a vein was divided and a small quantity of venous blood discharged. This obscured the parts at that point, and the knife was therefore carried to the other extremity of the tumour. Scarcely was this done, when the patient struggled, and on regarding her I perceived her complexion to be a livid pale color, and at the same instant the bubbling or clucking noise was heard, though indistinctly, but the place from which it issued was not visible, the surrounding skin and fat having fallen over it, at the moment of the transfer of the knife. Directly, the axilla was compressed. — The patient became insensible, breathing in a distressed manner as in apoplexy. — The tumour was at once separated. The posture of the patient was changed, and she was supported by those around. Some brandy was poured down, and ammonia introduced into the nostrils. The pulse however became less distinct every instant. Cloths dipped in hot water were thrown over the extremities. Strong frictions were applied to the chest and to all parts of the body. Considerable quantities of brandy were again poured down the throat. At this moment the livid color of the cheeks gave place to a suffusion of vermilion red — and no glow in the cheek of a youthful beauty ever gave one so much pleasure as that flush. I was turning to the class, who watched the different operations with intense anxiety, to say, "the danger is over," but checked myself and continued the efforts. But the flush soon passed off: the lividity reappeared; the respiration became more feeble; pulse at the wrist scarcely perceptible: and notwithstanding the redoubled appli-

cations of external heat and moisture, the extremities and the whole body cooled rapidly, and presently the respiration ceased.

As a last effort, I opened the larynx and put in operation the inflation of the lungs by a bellows, in a very speedy and perfect manner — imitating the movements of inspiration and expiration with great exactness — continuing the general applica- of heat and frictions to the whole surface. These administrations were continued for about twenty minutes longer, without any encouraging appearances. At the end of this time, I perceived there was no remaining hope of the restoration of my patient to life. The friends being anxious to take advantage of a vessel then sailing for their home, the body was soon after removed, and no opportunity afforded for examination.

The effects of the entrance of air into the blood vessels appear to have been known to Lieutand, Morgagni and other distinguished pathologists: but the danger of such an occurrence in surgical operations does not seem to have been adverted to, until the operation of M. Dupuytren, in which the admission of air through the external jugular proved suddenly fatal. Since the publication of this fact, the occurrence has presented itself to many surgeons in Great Britain and this country.

A natural skepticism in regard to these accidents has arisen from not considering the peculiar action of the auricles of the heart. How, it is asked, can air force itself into the veins, which are already filled with blood, and at the moment this fluid is discharging itself from an aperture in the vessel? The possibility of the accident will however be admitted, on recollecting that the auricles act not only like an expelling syringe, when they drive the blood into the ventricles; but that they have the power of suction, when they dilate themselves, thus sucking the blood from the two cavæ, and of consequence from the great veins connected with the cavæ. This suction power of the auricles explains what would otherwise be unintelligible, the movement of blood through the large inactive veins near the heart.

There remains another difficulty. Why do not the sides of these veins collapse when the blood is pumped from them by the auricle? and if they do thus collapse how can air be drawn

in through a small aperture in one of these vessels? This objection has been removed by M. Bèrard, who has shown that the large veins near the heart are protected by fasciæ, connected to the coats of the veins by cellular substance. The fasciæ themselves are attached to bones, in such way as to prevent their collapsing on the veins.—Further: it may sometimes happen that the coats of a vein assume a morbid structure which gives them an unhealthy rigidity, and in this manner prevents their collapse. This occurred to M. Dupuytren, as I am informed by my friend Dr Lodge, who was in Paris at the time—M. Dupuytren, being about to divide a large varicose saphena vein, expressed some apprehension that air might be admitted and that the result would be fatal. The vein was divided; the peculiar sound of the entrance of air was heard, and the patient expired.

In the first of the cases above related, the vein opened was a small vein crossing the neck from the median external jugular to the great internal jugular. At least I presume this to have been the vessel; though there can be no certainty of its identity, the incision in the neck being small; the parts not much uncovered, and the sheath of the internal jugular not opened. This small vein, stretched across the neck, was kept tense by its attachment to fixed veins at each extremity, and would thus be in a favorable position for the admission of air on the suction of the auricle.

The vein opened in the second case was the subscapular. It did not seem to be large, though perfectly visible before it was cut—and the point of the incision was at a sensible distance from the great axillary vein—say nearly an inch. The dissection had separated it from the surrounding parts in a considerable degree. The axillary cavity was extensively dissected; so that the attachments of the fasciæ covering the great vein must have been much relaxed.

Here then was a small vein, at some distance from the heart, dissected from the surrounding parts: and its receiving vein also dissected. The coats of the vein were not visibly diseased. The explanations of M. Bèrard will not therefore apply. The cause of the phenomenon in this case is to be sought in the *position* of the arm. The limb was extended and elevated; in consequence of which, the axillary vein was in a state of extreme tension. The subscapular vein was also kept tense by the chain of axillary glands and by the weight of the depending breast; for this organ had not been separated from the

glands, in order that they might be drawn down by it and exposed.

The possibility of these accidents under circumstances like those above, where there could be so little reason to fear them, must be a cause of anxiety to operators, in the removal of tumours from the neck and arm-pit; and I know of no effectual means to guard against them. *Pressure* on the vessels intervening between the disease and the heart would often be impracticable; and where it could be applied, the tension of the fasciæ would generally render it abortive. Causing the patient to *expire* the air from the lungs could only be practised for a moment. *Change of position*, by relaxing the vessels, would do something; yet the state of tension must in many cases be resumed, in order to carry on the operation. The immediate compression of the vessel on the appearance of the accident might sometimes save the patient from death, though not from very threatening appearances. For in the first case the patient's life was preserved; but although the accident was instantaneously arrested, he was saved with difficulty.

On a view of all these considerations it appears prudent to suspend an operation in the vicinity of the heart, at the instant of appearance of venous blood from a suspicious point; and to compress the vessel, that time may be had for observing whether dangerous symptoms are likely to arise, and if these actually appear, we should directly resort to the means spoken of. First, compress the orifice of the bleeding vein with the utmost care. Second, apply pressure on the veins between the wound and the heart. Third, relax the part in which the vein is seated. Fourth, the patient may be directed to expire the air from his lungs.

The means to be pursued for saving life, after air has been admitted, have been stated in the history of these two cases, and I know of none more effectual than were adopted. The opening of the temporal artery gave great relief to Case I. It was not resorted to in Case II., because the patient had already lost as much blood as she could spare, during the operation.

Art. III. — Boston Lying-in Hospital.

It is already known to many of our readers that measures have been commenced for the establishment of a lying-in hospital in this city; and we doubt not they will feel an interest in learning to what extent the effort has been successful. The want of such an institution has been for a long time the subject of contemplation and conversation with a few benevolent gentlemen in this city. The sufferings of many poor, but respectable, and deserving women are greatly enhanced at the time of their confinement, by the want of such comforts and attentions as the necessities of the puerperal state require. The objection which has been felt by many, that the institution might be liable to become an encouragement to vice, is effectually guarded against by limiting in the strictest manner, its benefits to married women. The fact, that a very considerable number of married women have at different times applied for admission into the Massachusetts General Hospital, where they could not be received, furnishes a strong presumption that they will not be unwilling to avail themselves of an opportunity to enter an institution provided expressly for them.

The plan for the establishment of the Boston Lying-in Hospital, originated with the trustees of the Massachusetts Humane Society. Having some funds unappropriated in their treasury, the trustees, about a year since, appointed a committee to consider to what benevolent object they could be devoted with the prospect of the greatest good to the community. This committee recommended that five thousand dollars should be appropriated towards the establishment of a lying-in hospital, for the benefit of married women only, on condition that a sufficient sum should be raised from other sources, to afford a reasonable prospect that the plan should be seasonably carried into effect. The report was accepted, and a committee entrusted with its execution. Soon after the Massachusetts Charitable Fire Society made a corresponding donation of five thousand dollars; and individual subscribers contributed so liberally and so cheerfully, as to leave no doubt of the speedy accomplishment of the undertaking.

During the last session of the Legislature an act of incorporation was obtained, by which a new corporation was created by the name of the "*Boston Lying-in Hospital.*" In March the

corporation was organized. The following are the officers of the institution.

JOHN HEARD, JR, Esq. *President.*
DANIEL P. PARKER, *Vice President.*

Trustees.

SAMUEL T. ARMSTRONG,
GEORGE HAYWARD, M. D.
ABBOT LAWRENCE,
CHARLES LOWELL, D. D.
JAMES SAVAGE,
THOMAS B. WALES,
} *Chosen by the Corporation.*

FRANCIS J. OLIVER,
ROBERT G. SHAW,
} *Chosen by the Massachusetts Humane Society.*

SAMUEL PERKINS,
LYNDE WALTER,
} *Chosen by the Massachusetts Charitable Fire Society.*

HENDERSON INCHES, *Treasurer.*
ELIAS H. DERBY, *Secretary.*

An estate has been purchased in Washington Street, a little south of the South Boston bridge, on very favorable terms, containing a lot of land sufficiently extensive for the purposes of the hospital, with a house upon it sufficiently large and commodious to commence the establishment with, so as to avoid the delay that would otherwise arise from the erection of a suitable building. It is expected that the house may be opened for the reception of patients in the course of the month of August or September ensuing.

Two physicians have been appointed by the trustees, Walter Channing, M. D. and E. Hale, Jr, M. D. There are to be, in addition, three consulting physicians and a resident physician, who are not yet appointed.

Provision is also made to have a board of directresses, consisting of twentyfour ladies, to visit in alternate committees at suitable times, and see that the interior arrangements are properly conducted, and that none but proper subjects are admitted; and also in other ways to aid in giving efficiency and delicacy to the benevolent objects of the institution.

Art. IV. — Polypharmacy.

We are ridiculously prone to imitate the fashions of our English progenitors. Fashion is not fashionable until it is imported. We thus often exhibit the incongruity of customs which are neither adapted to our climate, our necessities, or our institutions and government. In England where they have not sunshine enough to ripen a muskmelon, they very wisely trim their beavers so as to permit the daylight to have fair access to their visual organs, and the servile *pecus imitatorum*, the New York and Boston dandies, strut beneath our blazing skies from June till October with the brim of their castors (ours is a four inches) shaved down to an almost imperceptible periphery. We have known an indiscreet farmer on the fertile and sunny banks of the Connecticut, resolving to be thoroughly English in his agriculture, and governed by the directions of English books on gardening, cut away half the best bearing limbs of his apple orchard, in conformity to the English system of pruning, where an insular humidity renders the visits of the solar ray to the central branches of the fruit trees a much rarer occurrence than it is with us.

The general practitioners of Medicine in Great Britain, until within a few years, and we believe they are not now fully emancipated, have been degraded to the necessity of seeking for their remuneration for professional services by charges upon medicines furnished to their patients. Consequently the honest and honorable among them have suffered the degradation of making a mere trade of a learned profession, and those who were not so, have been induced to crowd their patients' *stomachs*, with medicine by way of emptying their *purses*. It has been a great desideratum with these last to know how many pills, boluses and draughts a patient with a trivial disease can swallow, and into how many doses a tonic or a febrifuge may be divided, in order to charge a sufficient number of items to secure a remuneration for each day's attendance. There is not the same interested foundation for this shameful practice with us, and yet from our habit of consulting English authors, and our proneness to copy British practice, we perpetuate a custom troublesome to ourselves, annoying to the patient, and frequently worse than useless in removing disease. 'The physician, says the sagacious Beddoes, 'would fain be thought never to have an empty quiver, though many of his shafts be head-

less ones. What a formidable array of phials and boxes is sometimes displayed in the management of a mild disease, which after all, may safely be left to its natural tendency to terminate in a given time. And who has not heard the remark from some perplexed nurse that there are not *hours* enough in the twentyfour to bring in all the doses ordered. Of all the remedial agents we can command in simple fever, for instance, and the remark may be greatly extended in relation to other diseases, *rest*, *quiet*, the total abstraction of all stimulants to the action of mind or body, are the most frequently disregarded, and the patient is almost hourly roused to swallow useless drugs because the attendants are taught to believe the sick are safe only when plied with medicines. The habit of prescribing useless medicines we trust does not prevail to so great an extent as in those days in which we had no American pharmacopeias. But there is room for still greater simplicity. What disease was ever cured by the filtred Liquor Camphoræ of the London Dispensatory, with perhaps one twentieth of a grain of Camphor to the ounce? And we hope we shall not be condemned for heresy if we imply a doubt whether the Liquid acetate of Ammonia, half an ounce of which is regularly swallowed every two hours by the sufferers under every variety of febrile disease, possesses a remedial agency commensurate with its very general employment. If our unkind fate should ever place us while laboring under fever, in the hands of any of those officious prescribers, we can only implore with Horace, "parce, parce, precor."

The principal reason why the age of Sydenham was an era in therapeutics is, that the simplicity of his treatment was a vast advance upon the polypharmacy which preceded him. To make early evacuations in acute diseases, and subsequently to abstain from unnecessary interference, constitute the essence of his practice. This great physician very justly denominates the absurd practice of crowding the patient with expletive remedies "trifling with myself and patient both." Some of our medical friends would do well to read his treatise on Hysteric diseases once a month for the rest of their lives.

Excessive credulity in the virtues of medicine is no proof of enlarged observation. We sometimes find physicians celebrated for their favorite medicines, and seriously inquiring whether the disease will do for their remedy, and not whether the remedy is proper for the disease. How are they delighted when they find a docile patient ready to swallow their

repetitions of inert prescriptions. Marmontel has spoken of a character of this sort, a certain Doctor Malouin, physician to the queen. Having prescribed for a man of letters who had some trivial ailment, a multitude of remedies, which he swallowed with avidity and exactness, and soon recovered, Malouin was so delighted with his docility that he embraced him with much warmth and declared that "*he was worthy of being sick.*" These Doctor Purgons of our own day almost need the satiric lash of another Mouliere.

The most simple and the most valuable rule to the physician is, never to prescribe a medicine without having in view a distinct object to be effected by it. We have never yet witnessed great proofs of the success of those who "fire into the tree and then look to see what falls." It has been truly said that the most active medical practice often consists in abstaining from interference. In this country the intelligence of the population is rapidly increasing, and with this increase of intelligence the character and influence of our profession is rising, and the time is surely not far distant, if it has not already arrived, when physicians may treat their patients like reasonable beings, and to obtain their confidence may appeal to their good sense rather than their credulity.

Art. V. — Massachusetts General Hospital.

Rupture of Liver.

April 18th, 1832. — L. D., truckman, Æt. 28 — In the afternoon of 16th inst. patient was over run by a truck, having on it a barrel of oil. The wheel passed transversely across his abdomen over the umbilical region. He was seen immediately after the accident by a physician who prescribed an active cathartic, which was several times repeated without moving the bowels; he also got many active enemas (22 by report) but had no alvine evacuation. Twelve foreign leeches followed by hot fomentations were applied to abdomen. Forty hours after the accident he was brought into the Hospital and presented the following symptoms. Face pale and covered with cold sweat — anxiety of countenance — respiration accelerated and labored — consciousness not extinguished — could converse rationally concerning accident — could not stand or sit — had constant nausea and vomiting. On examination

abdomen was found rather tumid and tense — great tenderness in every part on pressure — no ecchymoris except on a small place over crest of right ilium — abdominal recti muscles permamently contracted — urine passed freely and not bloody — had severe pain in abdomen, not limited to any particular region — pulsation of radial artery imperceptible — pulsation of carotids feeble and 130 in a minute — frame large and muscular — habits intemperate — on entrance got XXgtts. laudanum.

℞ Olei Crotonis gtt. i.

Repeat every four hours till free evacuation is obtained — Apply to umbilical region twelve leeches — afterwards warm fomentation of bitter herbs and spirits.

19. After 3 doses of oil had 5 copious dejections. — pulse at wrist perceptible, 120 in number, feeble — looks and reports himself more comfortable.

20. Pulse rapid; but firmer — countenance less distressed than on entrance — abdomen somewhat more tumid and tense — some appetite.

℞ Olei Crotonis gtt. i.

Repeat every four hours till bowels are moved. Apply twelve leeches to umbilical region — may have arrow root.

21. Had 3 copious dejections after 1 dose of oil — pulse more rapid and feeble — tumefaction of abdomen augmented — countenance more anxious.

22. Gradually became worse till 8, A. M. and then died, having lived from the time he received the injury to the period of his death five days and fourteen hours.

Examination of body three hours after death: — On laying open the cavity of the peritoneum, there was discharged from it four or five quarts of dark colored blood, having mixed with it a large quantity of bile. — This blood, was not separated into serum and crassamentum, and was more attenuated than that ordinarily taken from a vein. The process of coagulation went on after it was removed from the abdomen. — Quere — *how far was this process effected by the presence of the bile?* All the abdominal viscera were covered with a thick yellowish tenacious coat resembling a desposit of fibrin having mixed with it a large proportion of bile. On examining the intestines no rupture nor any other morbid appearance was discovered. On raising the liver it was found to be fractured horizontally from the posterior to the anterior face. The two fragments were held together merely by a small portion of the peritoneal

coat. On removing this viscus a partial fracture of the upper half was found, running from the middle of the divided edge upwards and outwards, leaving this small portion of a wedge like shape, having a base corresponding with the ribs. The whole gland was much enlarged, light colored and very brittle.

Dislocation of the Os Femoris upwards and backwards, reduced at the expiration of twelve days.

May 7th. — George Geyer, Æt. 10 years. Twelve days since this lad was struck just below patella of left knee by a projected stick of timber which knocked him down. On being raised was unable to walk or bear any weight on the injured limb. Being on an island in the harbor and his friends not aware of the severity of the accident, no surgeon was consulted. At the expiration of ten days, not recovering the use of his limb, he was brought to town and examined. It was discovered that the femur was dislocated, and attempts were made to effect reduction without success.

After remaining in the city two days he was brought to the Hospital and operated upon by Dr Hayward. When stripped for the purpose of examination, the nature of the injury was so apparent that it was at once decided that the femur was dislocated upwards and backwards on the dorsum of the ilium. The patient being laid on a bed, a sheet was passed between the legs, carried in a line obliquely upwards to left of patient's body and attached to bed post. A wet roller was passed round the limb just above the patella; to this a second roller was fastened, by which extension was made by two assistants drawing in the direction of the limb a little inward and forward across sound limb just above the knee.

Extension was gradually and carefully commenced and continued till the patient began to complain of pain, when further extension was suspended till he became easy from the muscles getting fatigued and relaxed. Having waited a short time the assistants drew more tightly upon the roller; at the same time the operator perceiving the head of the bone brought near to the acetabulum, rotated the knee and foot, and raising the head felt it glide into the socket. The reduction was effected in less than three minutes from the time the extension was commenced.

Before removing him to bed, rollers were bound firmly round his legs and pelvis to prevent a recurrence of the displace-

ment. Soon after the operation he took forty drops of the camphorated tincture of opium. Slept well through the night and next morning reported less pain than before operation. On the 12th, — the fifth day after reduction said he felt well— was able to walk about the room — wished to be discharged and was discharged well.

Fungus Hæmatodes of the Eye.

W. J. Æt. 54, colored—formerly mariner, but for last ten years stevedore. Patient reports that thirty years since while on a voyage to Liverpool and within eight days sail of port, his right eye received a severe injury from the rim of a straw hat. In a few hours after the injury, vision in this eye was lost and the pain became excrutiating, confining him to his berth. An application to the part of bread and water poultices afforded no relief. The eighth day after the accident having arrived in port he entered the Liverpool Hospital. Applied washes to the affected organ and took medicines internally. By these means vision was restored to the eye and it was as well as the other except being weaker. He experienced no more trouble from this eye till about fifteen years since when he was "sun struck" while going up the river to Calcutta. At this time he was attacked by pain in head, dizziness, loss of sight, first in right and afterwards in left eye, and loss of consciousness. On account of these troubles he entered the Calcutta Hospital, and was restored to his former state of health, which was continued till present difficulty commenced. The right eye in the mean time was less able of the two to endure bright light.

On the 4th or 5th of April last he commenced taking out of a vessel dry hides which had been packed away in oil of turpentine. From these hides a very pungent dust arose which caused great irritation in the eyes of all the men at work in the vessel.

On the 12th, affection of eyes compelled him to give up work. Lead wash was applied to eye — afterwards rose water — but no relief followed from either.

On the 16th he had pain in right side of head, right eye was much swollen and inflamed — could still see with this eye but never after this day — was now visited by a physician. Not being able to obtain leeches, xxxii ʒ of blood were taken from the temporal artery, which gave only temporary relief — was purged and salivated — pain still continued in right side of head and right eye — swelling and inflammation increased. On ac-

count of symptoms getting more aggravated came to Boston for advice.

April 27th. The eye was protruded about half an inch and very red — could not close eyelids — pain in right side of head and right eye incessant and severe — appearance of ulceration commencing under cornea. Cupped right side temple to iiiʒ and had a white bread poultice to affected eye — cathartic — Sol. Magnesia Sulphatis ivʒ — no meat or butter.

28th. Rather less pain — otherwise no material change.

29th. Symptoms as yesterday. Continue poultices.

30th. Pain and inflammation continue.

Poultices were kept constantly applied to the eye and saline cathartics administered every alternate day. The patient was confined to a strict antiphlogistic regimen and much depleted by general and local blood-letting. Still the disease remained unsubdued. The eye continued to be as much swollen and inflamed as on entrance. The pain in the right side of head and affected eye was incessant. Having made use of suitable remedies for subduing inflammation without success, the opinion the surgeon first entertained as to the nature of the disease was confirmed in consultation with Dr Warren. He considered it a case of malignant fungus confined to the eyeball; and that the only hope of preventing its terminating fatally in a lingering and painful death, was in an operation for extirpating the eye.

Influenced by these considerations, the nature of the case with the uncertainty of the result of the operation, should one be performed, was made known to the patient; who on a full knowledge of the difficulties determined to undergo an operation.

May 5. *Operation by* Dr Hayward.— The patient was seated in a chair with his face turned upwards towards the light. The eye being much enlarged, the external commissure of the eyelids was divided with a scalpel, that the organ might be more easily removed. The upper eyelids being raised by an assistant and the lower one depressed by the surgeon himself, the conjunctiva connecting the ball with the two lids was first divided. The scalpel was again carried round the eyeball dividing the nerves and tendons of muscles going to this organ. The eye being freed from the natural attachments on its sides, was seized and drawn somewhat from the orbit, it was so much enlarged that it was held with sufficient firmness without

passing a ligature through it. Then the scalpel was passed directly behind the ball and the optic nerve divided — this nerve was divided with as little suffering apparently as any other texture involved in the operation. *Quere — Has the optic nerve any other than its specific sensibility?*

The eye being removed, the inside of the orbit was carefully examined. The lachrymal gland and the lids were found to be in a perfectly healthy state, and it was not deemed necessary to remove either of them to prevent a recurrence of the disease. As there was but little hemorrhage nothing was introduced into the orbit. Simple application only was made over the eyelids. Soon after the operation the patient took 30 drops laudanum. Subsequently he had not one unpleasant symptom. He rested well the following night, and the next morning reported himself much better — having less pain in head and orbit of eye. Healthy inflammation commenced — the surface of the wound began to granulate and the socket was soon filled with healthy granulations. The treatment subsequent to the operation consisted of saline cathartics every alternate day to keep the bowels open — abstemious diet and simple cerate applied externally to the eyelids. He remained in the hospital sixteen days after the removal of the eye and was then discharged well.

Art. VI. — Diseases of The Eye.

The surgery of the eye has been growing into favor with modern practitioners. The professed occulist is now but little better thought of than the professed bonesetter, and it is getting fashionable to believe that one individual may become competent to take charge of all the different organs of the human body, when their diseased condition requires the aid of the healing art. The general surgeon is a much safer practitioner for the eyes than the mere occulist. Mr Lawrence, Mr Travers and Mr Guthrie, who are celebrated for their operations upon the eye, were first distinguished as anatomists and surgeons. M. Roux told us twenty years ago that he had extracted the chrystalline lens, in six hundred cases. It may safely be affirmed he would never have acquired the dexterity to do this with safety, if he had never accustomed himself to the use of the knife for any other operation. However it might do in the

days of Baron Wenzel, it certainly will not answer at the present day to presume upon the good nature of the public to be allowed to "spoil a hat full of eyes" in learning to become a competent operator.

The establishment of public institutions for diseases of the eye, has been the means of diffusing the knowledge of these diseases and the operations necessary for their cure. By collecting together a large number of cases the success of different modes of treatment has been amply tested, and the knowledge which the individual practitioners, having the charge of these institutions, have thus acquired, has been spread before the public in lectures and treatises and clinical instruction. The posthumous work of Saunders, the first fruits of the first London eye infirmary, was eagerly received by the profession, and the delicate and successful operation which he practised in cases of congenital cataract has been a rich legacy to mankind, and embalms his memory as a benefactor of the human race. But in assigning to Saunders the great credit which is justly due to him, we ought not to forget that the late Mr Hay, of Leeds, a most able general practitioner, had so far perfected the operation for cataract by division, and ascertained its practicability upon very young children, that there can be no doubt, if his field of observation had been equally extensive, he would soon have made himself familiar with the anterior operation of Saunders for congenital cataract, or with what many surgeons consider a better mode, the operation posterior to the iris. Indeed Hey's ninth case is one of this sort, and is full of interest.

Cure obtained by making the Needle pass through the Cataract. —"A child of two years old was admitted into the General Infirmary, on account of a congenital cataract in each eye. She could discern a glaring light, as a lighted candle, or burning coal; and could also, in a strong light, discern some of the most vivid colors. The motion of her eyes was usually parallel; but she often placed them for a short time in different directions, as if she was looking at two distinct objects. She rolled them about much, which made her sometimes appear like an ideot, though she was a very sensible child. She was often moving her hand with rapidity before her face, when placed opposite a window, and delighted to blow out a candle, and do other similar tricks, that made a variation in the sight which she possessed.

"I attempted to couch her left eye, but was repeatedly prevented by the difficulty of holding her steady, and by the power which she had of retracting her eye within the orbit, and thereby

rendering the conjunctiva flaccid. She could do this in so great a degree, as sometimes to hide the whole of the cornea by the wrinkled conjunctiva, which then lay in folds before it. I once succeeded so far as to penetrate the eye with my needle, and just move it through the cataract; but her wriggling motion made any continued attempt to depress the cataract so hazardous, that I was glad to withdraw my instrument without doing any injury to the eye.

"The child was dismissed till a more advanced age should render the operation less hazardous.

"About three years afterwards, being in the neighborhood of the child's parents, I looked in upon them for the purpose of seeing the child, and was agreeably surprised to find the left eye, into which I had introduced my needle, almost clear. The restoration of the child's sight (for it was now in part restored) had been so gradual, that her parents could not inform me of the time when she began to discern objects.

"The rolling motion of the eyes still continued."

Of the works emanating from the English press on diseases of the eye (and of the more extensive and valuable works of the continental surgeons, especially the Germans, we are almost profoundly ignorant in this country), the most read on this side the water have been those of Travers and Guthrie. The synopsis of diseases of the eyes by Mr Travers is particularly valuable to be placed in the hands of students, for its concise and perspicuous anatomical description of the eye and its appendages, and the clearness and simplicity of its arrangement in discussing the pathology and treatment. Mr Travers was a successor of Mr Saunders and predecessor of Mr Lawrence, as surgeon to the London infirmary for diseases of the eyes, and is entitled to the credit of being the first surgeon of eminence in his country, who designed to practice general surgery, and who was willing to cultivate with diligence and assiduity a knowledge of ophthalmic surgery, by performing the laborious duties connected with the office of surgeon in a public establishment. Guthrie's Lectures on the Operative Surgery of the Eye, is a book less known among us, and although very valuable to the practitioner as the record of a large experience, is greatly deficient in clear arrangement and lucid exposition. The display of learning in this book poorly compensates for its confused descriptions and ambiguous language. There is one fact clearly made out, for the simple exposition of which we may thank the honesty of Mr Guthrie — and this is, that the eye is an organ which will bear more violence without destruc-

tion than is generally supposed. This fact, while it affords no license to rude experimenters, will be found a source of great encouragement to enlightened perseverance.

The Practical Treatise on Diseases of the Eye, by Mr Mackenzie, one of the surgeons of the Glasgow eye infirmary, is the best compendium of ophthalmic practice which has reached us from the English medical press. This volume is a large repository of interesting facts upon the various topics included in the title of diseases of the eye, collected and arranged with somewhat of the same voluminous industry which characterizes the writings of Dr Good, of Mr Samuel Cooper, and of our own countryman Dr T. R. Beck. By means of copious indices it is made to serve the purpose of an ophthalmological dictionary, a sort of work greatly needed among American practitioners. It does not diminish the value of the work for general circulation that it is not accompanied by expensive plates, since a volume of between 800 and 900 pages, with colored plates to illustrate all those subjects which require plates for their most perfect explanation, would be held at a price entirely beyond the reach of common practitioners. Of course, it is impossible in this notice to give anything like an analysis of such a work, but some selected passages will, we think, give a favorable idea of the style and execution.

The following is the author's account of the treatment of inflammation of the edges of the eyelids, or ophthalmia tarsi, most common and very troublesome complaint, and is a fair specimen of the minuteness of his practical details. He quotes Mr Lawrence as denying that this complaint ever partakes of the nature of psosa, although that opinion has been common in England, but has not, we believe, prevailed in this country.

"*Treatment.*—The treatment of this disease consists, 1st, In such remedies as are likely to abate the inflammation, upon which the whole train of symptoms depends, to sooth the pain and itching, and prevent the bad effects of the gluing together of the lids: 2dly, In the use of stimulants, with the view either of deadening the excoriated and ulcerated parts, or of strengthening the debilitated eyelids: and, 3dly, In constitutional remedies.

"1. The first direction to be given to the patient, or to his attendant, is never to attempt to open the eyes in the morning, till the gluey matter is completely softened, so that the eyelids may separate without pain, and without injuring the eyelashes. For this purpose, a teaspoonful of milk, with a bit of fresh butter melted in it, may be employed for smearing the lids, rubbing it

with the finger gently along the agglutinated eyelashes. A piece of soft sponge, wrung out of hot water, is then to be held upon the eyelids for some minutes; after which the patient will find the eyelids yield without pain, to the least effort he makes to open them. With the finger nail, the whole of the gummy matter is immediately to be removed; and should it happen, that during the day, or towards evening, there is any reappearance of it, the same plan must be adopted for its entire removal. This is absolutely necessary, because as long as the gummy matter is allowed to remain, no application of eye-water or salve can be of any use, as it never gets into contact with the seat of the complaint.

"2. The first indication is further to be promoted by the use of a warm decoction of chamomile flowers as a fomentation, after the lids have been thus completely freed from their morbid secretion.

"3. Scarification of the palpebral conjunctiva, the application of leeches to the external surface of the lids, and to the neighboring skin, blisters behind the ears, and to the nape of the neck, and laxatives, are also to be occasionally employed, for the purpose of subduing the inflammation.

"4. Cataplasms of bread and water, enclosed in a small linen bag, and laid over the eyelids, during the night, are often useful in aggravated cases.

"5. A caustic issue in the neck, or arm, is often attended with benefit. Indeed, it rarely happens that much good can be effected without this remedy; in those cases in which the lids, from long neglect, have become greatly thickened and callous, a state which is sometimes termed tylosis.

"6. Next in importance to the careful removal of the morbid secretion, and the use of hot fomentations in the morning, is the application of a stimulating salve to the edges of the eyelids at bedtime. The salves which have been found most useful, are the red precipitate, and the mild nitrate of mercury. The latter is prepared according to the formula in the Pharmacopœia, but is usually still farther reduced in strength. The former consists of 12 grains of red precipitate, carefully levigated into an impalpable orange powder, and mixed with 1 ounce of fresh butter, or of soft cerate. About the bulk of a hemp seed, of one or other of these salves, is to be melted on the end of the finger, and rubbed into the roots of the eyelashes, and along the Meibomian apertures, every night, or every second night, according to the severity of the symptoms, and the effects produced. If much irritation follows the application of the salve, once every second night will be sufficiently often, a little simple cerate, softened by an addition of axunge, being used on the alternate nights. In some cases we are obliged to reduce the strength of the red precipitate salve, while in other instances, 20 grains to the ounce will be borne with advantage.

"Salves are often employed for the cure of ophthalmia tarsi, without almost any effect, from these two necessary particulars not being known or attended to, namely, that the salve is not to be smeared over the diseased crust, but applied only after the lids are freed of every particle of the morbid secretion, and that it is not to be pencilled softly on, but pressed, by repeated friction, into the diseased roots of the eyelashes, and into the mouths of the Meibomian follicles. Unless it smarts considerably, it, in general, does little good.

"Other salves besides those above mentioned, are sometimes employed for the cure of this disease; especially Janin's, which consists of 30 grains of the white precipitate of mercury to an ounce of unctuous substance. In old people, and in those incurable cases in which the Meibomian apertures are obliterated, this salve answers better, perhaps, than any other. The ointment of oxide of zinc, that of carbonate of lead, and various others, have also been used. In porriginous cases, a mixture of sulphur with the mild nitrate of mercury ointment, will be found very effectual.

"Not unfrequently we meet with slight, but very irritable cases of ophthalmia tarsi, in which not even the mildest salve can be borne. Fomentations, with poppy decoction, or simply with warm water, afford most relief in such cases.

"7. During the course of the day, it is proper to bathe the eyelids carefully with a solution of from one to two grains of corrosive sublimate in eight ounces of distilled water. This collyrium is to be used tepid; and after the outside and edges of the lids are well soaked with it, by means of a bit of linen, it may be allowed to run in upon the eye, so as to get into contact with the inner surface of the lids, which in this disease is always more or less inflamed.

"Other collyria may also be employed, as weak brandy and water, a solution of sulphate of zinc, or of subborate of soda.

"8. Should little ulcers be present along the edges of the lids, they are to be touched with the lunar caustic solution, or with the solid nitras argenti.

"When the lids are greatly thickened and indurated, their edges much incrusted, and the roots of the eyelashes ulcerated, it has been recommended to extract all the eyelashes, and then touch the whole diseased surface lightly with a pencil of lunar caustic. This has a great effect in healing the ulcers, and diminishing the swelling. In a few days the caustic may be repeated. Three or four repetitions are generally sufficient. Mr Lawrence, who recommends this practice, states, that there is another inducement to extract the cilia. Those which fall out by ulceration are never replaced, because the bulb which secretes the hair is destroyed, but when they are plucked out, they are afterwards restored.

"9. As the obstinacy of ophthalmia tarsi almost invariably depends on a faulty constitution, tonics and alteratives are always necessary. The tonics chiefly to be depended on are the sulphate of quina, other preparations of bark, the mineral acids, the carbonas ferri præcipitatus, and chalybeates in general. These are to be given in appropriate doses, and continued for a length of time. The principal alterative employed in the cure of this disease, is mercury, and perhaps the form, which on the whole is the best, is Plummer's pill. Whether alteratives or tonics are employed, a dose of laxative medicine, as sulphate of magnesia, infusion of senna, or powdered rhubarb and jalap, aught to be occasionally interposed.

"10. The regulation of the patient's diet is essential for the cure of this disease. Care is to be taken lest the stomach be overloaded at bedtime, or disturbed by indigestible or improper food during the day; for if this be permitted, the morbid secretion becomes more copious, and a greater degree of irritation and inflammation is induced.

"11. The warm bath, with sea-water, if it can be had, is an excellent remedy in this disease.

"12. Pure air and regular exercise are to be recommended.

"13. The clothing of those affected with the disease, ought to be particularly attended to. A delicate child is easily chilled. The skin, stomach, liver, and bowels, are thereby disordered; and an attack of this disease, or of strumous conjunctivitis, is a frequent concomitant. These diseases are always difficult of cure when the weather is damp and cold.

"14. Sleep at early hours is of great consequence. Hardly anything tends more to confirm this affection of the lids, than sitting up late at night."

Diseases of the lachrymal canals, and sac, and of the nasal duct are so connected with the catarrhal constitution of our climate, that their treatment must occasionally fall under the care of every practitioner. Mr Mackenzie's 6th chapter upon the diseases of the excreting lachrymal organs is particularly complete and valuable. We select a few sentences of the 10th section of this chapter.

"*Obstruction of the Nasal Duct.* — The examination of the nasal duct, equally with that of the lachrymal canals, is to be instituted before healing up any artificial opening or fistula of the sac; it is also to be instituted on the day after a mucocele has been laid open.

"The best instrument for examining the nasal duct is a common silver probe. This is to be introduced horizontally till it

touches the nasal side of the sac, it should then be raised into a vertical position, and its point directed downwards and a little backwards. Turning the probe upon its axis, we pass it from the sac into the duct; and as we continue to press it gently downwards, the instrument, if the duct is pervious, enters into the nose. If its point meets with some obstruction, we must not immediately conclude that there is an obliteration of the duct. We must press down the probe a little more strongly, yet without violence: turning it round between the fingers, and giving it different directions. By these means the obstacle may frequently be overcome, and the probe will suddenly descend.

"If the obstacle remains as before, and is extremely firm, still this is not sufficient ground for us to conclude that there is a real obliteration: because there are many other causes, particularly diseased states of the mucous membrane, from which the difficulty we encounter may proceed. That membrane may be tumefied, its mucous cryptæ enlarged and indurated, and thereby the calibar of the duct more or less diminished, yet these obstacles may be capable of yielding, so that by considerable pressure we may succeed in passing the probe into the nose. In other cases, the tumefaction and induration of the mucous membrane may yield so little, as to render it impossible to reach the nose with a probe of the ordinary size, so that it requires great patience to pass a small silver probe through the duct.

"If we cannot reach the nose with the small probe, if its point hit constantly against the same unyielding obstacle, if we are able to press it down with very considerable force without the patient complaining of any painful feeling, there is great cause to suspect an absolute obliteration of the duct. The probe being carried down to the obstacle, we lean our hand over the brow of the patient, and holding the instrument firmly between the thumb and index-finger, increase the pressure till it has sunk to the farther depth of half a line or a line. We suddenly relax the pressure. If the probe rises from the obstacle as from an elastic cartilage, the patient during the whole of this experiment feeling no pain, we may safely conclude that the duct is obliterated. From the depth to which the probe can be passed, we ascertain the distance of the obliteration from the termination of the duct.

"Though the nasal duct is only seven-twelfths of an inch in length, there are three points in its course at which stricture is particularly apt to occur. One of these is exactly where the sac ends and the duct begins. The calibar of the duct is there narrowed by a circular fold, the thickening of which frequently causes the obstruction. Janin details the appearances upon dissection of a stricture in this situation, and describes the mucous membrane of the duct as presenting a plaited appearance like

the sleeve of a shirt at the wrist.* A second fold of the same kind occurs in the middle of the duct, in many subjects, though not in all; † and hence this part becomes from a similar cause the frequent seat of stricture. The third, and perhaps the most usual situation of stricture, is at the termination of the duct in the nostril.

"If we succeed, though it may not be without great difficulty and after many trials repeated during several days, in bringing a probe into the nose, which we can easily recognise by the hitting of the end of the instrument against the floor of the nostril, as well as from the feeling of the patient, we remain convinced that it is yet possible to restore the whole excretory apparatus of the tears to the exercise of its function."

The 14th chapter upon cataract occupies nearly an eighth of the volume, and presents the whole of this interesting subject in a clear and beautiful manner. The following remarks may be taken as a specimen of the author's minuteness and caution in directions.

"*Circumstances to be attended to in cases of cataract.*—To ascertain with accuracy the existence of cataract, and the nature of any cataract which may present itself, it is necessary to attend minutely to the following circumstances.

"1. The opacity; its color, extent, form, and seat. Whiteness denotes either a dissolved lens or a capsular cataract; greyness, a lenticular cataract; amber, or dark greyness, that the lens is hard; light greyness, that it is soft. If the whole extent of the pupil is uniformly opaque, the cataract is probably lenticular; if the opacity is streaked or speckled, it is probably capsular. If the opaque streaks radiate from a centre, the posterior hemisphere of the capsule is probably the seat of the disease. If the form of the opacity is convex, the anterior capsule or the lens is the part affected; if concave, the posterior capsule. With the light concentrated on the pupil, by means of a double-convex glass, all these particulars are carefully to be investigated.

"2. The iris is to be examined; its color, mobility, form, situation, and the shadow it throws upon the cataract. Is it green, or otherwise discolored, denoting previous inflammation, which may have left the eye in a state unfavorable for any operation? Covering the eye which we are not examining, that all sympathetic motion of the iris may be avoided, we next examine

* Mémoirs sur l'Œil, p. 115. Lyon, 1772.

† Soemmerring, Abbildungen des Menschlichen Auges, p. 32. Frankfurt am Main, 1801.

whether the pupil moves rapidly, and extensively, as in health; or slowly, and to a very limited degree, so as to lead to the suspicion of the retina being imperfectly sensible. Is the pupil fixed, and irregular, as if bound to the capsule by adhesion, in consequence of effused lymph; or does it tremble on every motion of the head, denoting a peculiar paralytic state of the iris, attended by an inordinate quantity of aqueous humor in the posterior chamber, and generally by amaurosis? Is the iris convex, and nearer to the cornea than natural, an unfavorable circumstance for the operation of extraction? Is the shadow thrown by the iris on the opaque body distinct, or is there no shadow? This depends on the distance of the opaque body from the iris; or, in other words, the depth of the posterior chamber. If there is no shadow, the posterior chamber is probably obliterated by the pressure of a large and soft lenticular cataract. If the shadow is distinct, the lens is probably small and hard.

"3. The eyeball in general deserves attention; its color, degree of firmness, size, and place in the orbit. A dirty yellow color of the sclerotica marks general ill health, which, of course, is unfavorable for attempting a cure by operation. A boggy eye marks deficiency of vitreous humor, attended by amaurosis. A stony hardness of the eye denotes glaucoma, with a superabundance of dissolved vitreous humor. An eye considerably below the medium size never recovers any useful degree of sight. A very prominent, or a very sunk eye, is unfavorable for extraction. In the latter case, that operation can scarcely be performed. In the former, the lower lid is extremely apt to intrude between the lips of the wound of the cornea, and keep it from healing.

"4. The degree of vision must carefully be noted, both as denoting the sentient state of the retina, and serving to determine the propriety of an immediate operation. If the patient can distinguish objects, while regarding them with his back turned to the light, the operation ought to be deferred till the sight is more obscured. If he distinguishes merely the shadow of the fingers, while they are moved across between him and the light, the retina is sensible, and the operation may be performed with the prospect of restoring an additional share of vision.

"5. The age affects materially the consistence of the lens, whether in health or disease. Fluid in childhood, gelatinous in youth, firm at middle life, hard in old age, the lens, affected with opacity, may readily be divided in the first two periods by the needle, and will dissolve in the aqueous humor, while in the last two, these processes may be difficult or impracticable.

"6. The young practitioner ought never to pronounce absolutely even on the existence of cataract, without dilating the pupil by belladonna; and the most experienced may derive advan-

tage from exposing in this way the whole field of the disease to his view."

The following does not present a very flattering exhibition of the success of operations for cataract, and may serve somewhat to abate the longing of panting inexperience.

"With regard to the ultimate prognosis, practitioners are too much in the way of raising sanguine hopes in the minds of patients affected with cataract, that by surgical operations on the eyes, their sight may be almost perfectly restored, not weighing with sufficient consideration, the frequency with which other morbid changes in the organ of vision come to be associated with this disease, especially in advanced life, such as dissolution of the vitreous humor, absorption of the pigmentum nigrum, and imperfect sensibility of the retina. Many a patient, who, before the operation, discovers the hand passing before the eye, sees very little more after the opaque lens is removed, on account of the dulness of the retina, or the deficiency of the choroid secretion.

"The dangers, too, attending the operations for cataract, are much too lightly estimated, in pronouncing an ultimate prognosis in this disease. Operators on the eye seem to think that they have done enough, when by the publication of a few successful cases, they have persuaded the profession and the public of their expertness; but unless the circumstances of each case are minutely detailed, and a history given, not of select cases, but of every case occurring during a year, or longer period, and each history brought down, not to a few days or weeks merely, but at least to several months, no conclusion can be drawn regarding either the abilities of the operator, the merits of his particular mode of operating, or the general success of operations for the cure of cataract. Such facts only as the following are capable of serving as data for an ultimate prognosis in cataract.

"1. The Royal Acadamy of Surgery, solicitous to know the truth with respect to Daviel's success, applied to M. Caqué, one of their correspondents, who resided at Rheims. This gentleman, by a letter dated 15th January, 1753, informed them, that Daviel had there operated on thirtyfour cases; seventeen of which were perfectly restored to sight, eight saw indifferently, and nine received no benefit.*

"2. In June, 1753, La Faye, Poyet, and Morand, operated the same day upon nineteen cataracts: the two former by extraction, although each according to his own method; Morand, by depression. Of those operated on by La Faye, two saw well,

* Mémoires de l'Academie Royale de Chirurgie, 12mo, Tom. v. p. 397. Paris, 1787.

two indifferently, and two received no benefit at all. Two of Poyet's cases saw well, two less, one could discover only daylight, and two nothing. Three of Morand's patients could see tolerably well, and three remained as dark as before.*

"3. Mr Sharp, in a paper read before the Royal Society, 22d November, 1753, gives an account of his having performed the operation of extraction on nineteen eyes, with about half of which, he had what he thought tolerable success; though he grants that not a single one escaped a considerable degree of inflammation†

"4. Dr Tartra has published the results of the operations for cataract, performed in the *Hôtel-Dieu*, at Paris, from the commencement of 1806 to 1810, inclusively. The total number of cases was 113, 70 of which were extracted, and 43 displaced. Nineteen of the 70 extractions, and 24 of the 43 displacements, were successful; 6 extractions, and 4 displacements, were followed by partial success; 8 extractions, and 5 displacements, were total failures; and the results of the rest were either unknown, or more or less unfavorable. Dr T. observes, that by adding to the 43 successful cases, the other 10, where the operation was attended by partial success, it appears that nearly half the patients operated on, obtained a greater or less degree of sight. He adds that it is generally thought that two out of five patients operated on for cataract, recover their sight."‡

Dr M'Alister has already succeeded in alarming some of the victims to the narcotism of the Indian weed, into a relinquishment of the creature comforts of smoking, chewing, and snuffing; but we think his quiver might be furnished with an additional shaft from the following passage of Mr Mackenzie's work.

"I have already had occasion repeatedly to hint my suspicion, that one of the narcotico-acrids, which custom has foolishly introduced into common use, namely, tobacco, is a frequent cause of amaurosis. A great majority of the amaurotic patients, by whom I have been consulted during the last twelve years, have been in the habit of chewing, and still oftener of smoking, tobacco, in large quantities. It is difficult, of course, to prove that blindness is owing to any one particular cause, when perhaps several causes, favorable to its production, have for a length of time been acting on the individual; and it is especially difficult, to

* Ibidem, Tom. vi. p. 332.

† Philosophical Transactions for 1753. Vol. xlviii. Part I. p. 322. London, 1754.

‡ De l'Opération de la Cataracte, p. 83. Paris, 1812.

trace the operation of a poison, daily applied to the body, for years, in such quantities as to produce, at a time, only a very small amount of deleterious influence, the accumulative effect being at last merely the insensibility of a certain set of nervous organs. At the same time, we are familiar with the consequences of minute portions of other poisons which are permitted to operate for a length of time on the constitution, such as alcohol, opium, lead, arsenic, mercury, &c, and we can scarcely doubt, that a poison so deleterious as tobacco, must also produce its own peculiar injurious effects.

"It would appear that there are two principles of activity in tobacco, an essential oil, and a peculiar proximate principle called nicotin, both of which are capable of producing death, but by very different physiological actions, the former by its effects on the brain, the latter by its influence on the heart. The essential oil is so virulent a poison, that small animals are almost instantly killed, when wounded by a needle dipped in it, or when a few drops of it are let fall upon their tongue. Dr Paris* records the case of a child, whose death was occasioned by her having swallowed a portion of half-smoked tobacco, which was taken from the pipe of her father, and in which there no doubt existed a quantity of essential oil, which had been separated by the act of smoking; for in the process of smoking, the oil is separated, and being rendered empyreumatic by heat, is thus applied to the fauces in its most active state. Now, that the regular application, in this way, of a poison of such power, perhaps five or six times daily for months or years together, should at length be productive of serious effects on the nervous system, and especially on the brain, cannot surely be matter of wonder. Indeed it would be surprising, if it were otherwise."

On the whole Mr Mackenzie's book is a most excellent compendium of practice in diseases of the eye, and is precisely such a book as is needed by the American practitioner. The Medical Society of this Commonwealth have undertaken to distribute to its fellows a volume of practical medicine annually, and we know of no more acceptable present which can be made to them for the coming year, than a reprint of the treatise above noticed. Only we desire, if such a task should be in contemplation, that it may be announced so early as to anticipate the complaint of interference on the part of the trade, which has proved a great embarrassment in the selection of a volume for the present year.

* Pharmacologia, vol. ii. p. 451. London, 1825.

Art. VII. — Massachusetts Medical Society.

The Annual Meeting of the Fellows of this Society was held on Wednesday, June 6th, 1832, at the Lecture-room of the Boston Athenæum.

The meeting was called to order at half-past 10 o'clock by the President.

The Recording Secretary read the record of the last annual Meeting, and an abstract of the proceedings of the Counsellors during the past year.

The Corresponding Secretary read a letter from Daniel Thurber, M. D., of Mendon, informing the Society, that on account of the infirmities of age and bodily indisposition, he should be unable to attend, and perform the duty, with which he had been honored by the Society, of delivering the annual address. It was then voted to proceed to the choice by ballot of 80 Counsellors for the ensuing year.

Drs McKean, Otis and J. Flint of Boston, were appointed Scrutineers, who reported that the following Fellows were duly elected, viz.

For Suffolk — Drs William Ingalls, John Dixwell, James Jackson, Benj. Shurtleff, John C. Warren, John Randall, Geo. C. Shattuck, John B. Brown, Walter Channing, Jacob Bigelow, George Hayward, Enoch Hale, jr., Solomon D. Townsend, John Ware, Zabdiel B. Adams, David Osgood, Edward Reynolds, John Homans.

For Essex — Drs Richard Hazeltine, Abel L. Pierson, Andrew Nichols, Thomas Manning, Samuel Johnson, Joseph Kittredge, Jeremiah Spofford, Richard S. Spofford, E. L. Coffin, Calvin Briggs, J. G. Johnson.

For Middlesex — Drs A. R. Thompson, Amos Bancroft, Calvin Thomas, Rufus Wyman, Thomas Bucklin, John Walton, Zadock Howe, William J. Walker, Timothy Wellington, J. C. Dalton, Ephraim Buck, J. Bartlett.

For Worcester — Drs Stephen Bachelder, jr., John Green, Charles W. Wilder, Benj. F. Heywood, Edward Flint, Amos Parker, Geo. Willard, J. Stone.

For Hampshire — Drs Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Levi W. Humphreys, Job Clarke, Elisha Mather.

For Berkshire — Drs Henry H. Childs, Robert Worthing-

ton, Wm. H. Tyler, Asa G. Welch, Alfred Perry, Hubbard Bartlett, R. Fowler.

For Norfolk — Drs Amos Holbrook, Nathaniel Miller, John Bartlett, Robert Thaxter, Samuel Bugbee, Jeremy Stimson, Ebenezer Alden.

For Plymouth — Drs Nathan Hayward, Hector Orr, Cushing Otis, Ezekiel Thaxter, Paul S. Nichols, N. Whitman.

For Bristol — Drs. Alexander Reed, A. Mackie, W. Witridge.

For Barnstable — Drs Joseph Sampson, Aaron Cornish.

Reports of the Treasurer were read, on the financial concerns of the Society.

The Committee appointed to audit the Treasurer's accounts, reported that they were correct and duly vouched.

The Committee appointed to examine the Library reported that the books were in good order.

A report was presented, of a Committee appointed by the Counsellors to prepare a new draft of the By-Laws of the Society, which had been approved by that board. This report was read and acted upon by sections, and with some slight amendments was adopted and ordered to be printed, with a list of Fellows.

A memorial was read from the Berkshire District Society, requesting certain changes in the By-Laws, relating to the organization of that District. This was referred to the Counsellors.

At 3 o'clock the Society adjourned, and proceeded to the Exchange Coffee House to dinner.

The meeting this year was attended by a larger number of Fellows than has usually been seen, and the proceedings were conducted with a marked degree of mutual good feeling. We cannot however forbear to express our opinion that unless some measures are adopted by those to whose hands the concerns of the Society are entrusted, to give a more intellectual character to the meeting, it will soon be difficult to collect even a quorum for business. For two successive years, no address has been delivered; and we would suggest the expediency of following the practice adopted in many Societies of electing a *first* and *second* orator, this method does not indeed infallibly secure its object, but certainly increases the chance of success.

The work issued this year by the Society, forming the sec-

ond volume of the Library of Practical Medicine, contains the Principles of Surgery by John Pearson, F. R. S. and Observations on the Origin and Treatment of Local Diseases by Abernethy, F. R. S. We think the selection extremely judicious. Both of these works are scarce among us, and are yet of a character that render them highly valuable to every physician and surgeon. The work of Mr Pearson is one of the very few professional writings that we finish *without* exclaiming, "*Ohè! jam satis est.*"

On the following day the usual meeting of the Counsellors was held, and the officers of the Society elected. Dr Jackson had at the previous annual meeting signified his determination to retire from the Presidency of the Society at the present time. At the meeting a letter was read from Dr Holbrook, Vice President of the Society, asking leave to resign his Fellowship, on account of his advanced age, which was of course granted, as the by-laws expressly confer the right to any Fellow to retire at sixty if he chooses. It became necessary therefore to fill both these offices with new candidates. The following officers were elected; nearly or quite all of them with entire unanimity.

John C. Warren, M. D. *President.*
John Dixwell, M. D. *Vice President.*
George Hayward, M. D. *Corresponding Secretary.*
E. Hale, Jr., M. D. *Recording Secretary.*
Walter Channing, M. D. *Treasurer.*
David Osgood, *Librarian.*

Drs W. Channing, G. Hayward, E. Hale, J. Homans, and W. J. Walker, *Censors* for the 1st District.

Drs J. Green, B. F. Heywood, E. Flint, C. W. Wilder, and G. D. Peck, Censors for the 2d District.

Drs J. H. Flint, E. Mather, Atherton Clark, E. Dickinson, and David Bemis, Censors for the 3d District.

Drs W. H. Tyler, A. Perry, O. Wright, R. Worthington, and A. G. Welch, Censors for the 4th District.

Drs J. Bigelow, G. Hayward and E. Hale, the Committee of Publications; and Drs W. Channing, J. Ware, and Z. B. Adams, the Committee on Resignations.

Jacob Bigelow, M. D. of Boston, was appointed to read the dissertation at the next annual meeting of the Society.

Twentyseven Fellows were admitted into the Society on their own application; and ten besides the late Vice President had leave to resign their fellowship, either on account of advanced age, or of having withdrawn from practice.

Besides the ordinary routine of annual business the most important subject for the Counsellors to act upon was, that of the memorial from the Berkshire District Medical Society, which was referred to the Counsellors by the Society on the preceding day. A motion was made to recommend to the Society to grant to the Berkshire District, instead of one third of the amount of assessments paid by members of the District, and its portion of 60 volumes from the Library, as promised in the amended by-laws, two thirds of the amount of their assessments, they relinquishing their claim to the books. But after a full discussion the motion was negatived.

Art. VIII. — Cholera.

We had well nigh made up our Number without a word about Cholera. The opportunity, indeed, was a tempting one, thus early and easily to render ourselves *distinguished*, if it were only in a negative particular, for we question if a single periodical, — we had almost said a single volume of any kind, — has appeared within the last six months, or will appear within the same term of time to come, that has not contained something on this all engrossing subject. But a more serious restraint upon our introducing it at all, was the utter hopelessness we felt of being able to offer anything complete or satisfactory, on either of the interesting topics it presents, within the brief space which we can allow to any single article.

Materials enough were at hand; for the late European Medical Journals have contained little else than histories, cases, and opinions of Cholera—but to select, arrange, and condense these various, and on many points conflicting statements, was an undertaking that we could scarcely think of, without exciting such an opposition from the vis inertiæ principle, as threatened an absolute revolution in the microcosm; and the rebellious member, as generally happens, prevailed. But happily this

forbidding labor has been done *for us*, and infinitely better than it would have been *by us*, in the Report just published by a Committee of the Massachusetts Medical Society; and if by the few words of praise which we cannot refrain from bestowing on it, we are instrumental in commending this Report to the perusal of those who desire to become acquainted with the subject, we shall have done far more towards extending a thorough knowledge of cholera, than if we had filled our Collectanea with selections from our cotemporaries, and the remainder of the Magazine with our own reflections and speculations upon them.

It is a neat octavo of about two hundred pages, in form and style corresponding with the Library of Practical Medicine, of which valuable collection of standard professional works, it well deserves to become a part. For, although, on a critical analysis, we should be obliged to controvert some of its doctrines either expressed or implied, and to express our regret at the evident bias of its author as to the manner in which the disease is propagated, a questionable topic which the Committee, indeed, do not undertake formally to decide, but on which the general scope and tenor of the Report is sufficiently determinate — yet we do not hesitate to pronounce it the most complete treatise on the whole subject which can be found, and moreover to acknowledge, with great satisfaction, that the evidence on the various questions discussed, is presented with uncommon fairness, and that no attempt appears in it to enforce any of its doctrines, by a misuse of facts or authority.

We shall make it our business in future numbers to mark the progress of the pestilence on our continent, and record the preventive and sanative measures which are instituted on account of it by the public authorities of our metropolis and the vicinity, and in case it should actually appear among us, to present a faithful account of the place and circumstances of its first breaking out, of the character and symptoms it assumes, and of the most successful method of treatment.

The same particulars will, of course, engage the attention of our medical friends wherever there may be an opportunity to observe them, and we cordially invite them to make the Magazine the repository of any facts or observations, of the kind they may desire to publish, and follow.

COLLECTANEA.

It is but a few years since Medical Jurisprudence has been studied as a distinct branch of science in this country, by either of the professions into whose labors it enters. Our late veteran Solicitor-General assures us, that it was some time after his long career of public service commenced, before it was recognised by the courts of this Commonwealth as an important portion of the law, and we believe the application of it to cases like that given in the following article, is yet without an example among us. The Massachusetts Hospital Life Insurance Company (a title, by the way, which we believe has too little relation to the real character and operations of the institution, to justify its awkward prolixity, and which suggests associations not altogether consistent with its ominous influence on the future condition of property in our state) is the only institution in Massachusetts which underwrites on the life of its customer; and they have never yet brought up for adjudication a question like that involved in the case of the Earl of Mar. But such questions must soon arise here, as the practice of effecting insurance on life is extending, and that of opium eating, although less common here than in Europe, is even now much more so than is generally supposed.

We republish the following paper from the Edinburgh Medical and Surgical Journal, not only for its value to the medical jurist, and to underwriters, but also on account of the interesting pathological observations which it contains of the learned and acute Dr Christison.

E. M.

Effects of Opium Eating.

"*Cases and Observations in Medical Jurisprudence. Case X. On the Effects of Opium Eating on Health and Longevity. By* John Christison, *M. D., Professor of Medical Jurisprudence and Police in the University of Edinburgh.*

"Who does not recollect the 'Confessions of an English Opium Eater?' and who that has read that extraordinary little volume is not quite made up on the effects of opium, though he has never seen a grain of it in his life? But the jury who tried the Earl of Mar's case could surely never have read the book, or they would not have returned the verdict which they did; nor could the judge: both were in a barbarous and most unjudicial state of ignorance — an argument which Dr Christison, by the way, should not have omitted in summing up his objections to the verdict. The misery — the ideal existence for thousands of ages in agonies unutterable — the short snatches of blissful repose

at intervals; then the maddening pleasure for an age again, yet all the while the wretched victim committing suicide by his unbridled indulgence in the use of a drug which he knew well was wasting the springs of life, and bringing with it a premature senescence and an inevitable wreck! The man survives; but by what a sacrifice! Is there anything in the self-denial of the faquirs of Hindostan, or of the monks of La Trappe, to compare with the pangs endured by De Quincy in his stubborn self-restoration? It may be all fiction, no doubt, but we feel it as if it were true; and we say, that if judge and jury, in Lord Mar's case, had been readers of good books — as they should have been to decide in a case so important — it would have been utterly impossible for them to decide as they did. But, perhaps, says the reader who knows nothing of Lord Mar's affair, perhaps it was as well that the judicial personages in question were divested of those trammels of strong feeling which would have tied and bound their minds, had they perused the 'Confessions?' No; their minds would have been but the more enlightened, and they would have concluded right. The inference from the volume of De Quincy, and from the observations of Christison, are one and the same. But how differently are we led to the result! How does the wand of the philosopher triumph over the talisman of the romancer! How are the wild creations of this extraordinary sensualist softened down by the calm reasonings of the inquirer after truth!

"We take it for granted, then, that all our readers are acquainted with the 'Confessions.' If they are not, we can only pity them, for they ought to be: they would then read the remarks of Dr Christison with greater zest, and we should promise them a rich treat from the contrast of fact and fiction — *if* the confessions *be* fiction, of which *we* are by no means persuaded. Dr Christison's observations are founded upon a trial which took place at Edinburgh a year or two ago; of which the following are the leading particulars: — In 1826 the late Earl of Mar effected an assurance on his life with the Edinburgh Life-Assurance for 3000*l.* In September, 1828 he died of jaundice and dropsy, at the age of 57; and the amount of insurance was claimed by Forbes and Co. who held the policy as his lordship's creditors. Payment, however, was refused by the Company, on the ground that Lord Mar had been an opium eater previously to and at the time of effecting the policy; that he continued the same practice during the remainder of his life; and that these facts had been concealed from the Company. Hence the action at law.

"It appeared from the general evidence given on the trial, that in addition to the usual satisfactory answers of the party insured and his medical referee, that the latter, Dr Geo. Wood, who was also the medical officer of the Company, in filling in replies to

the queries contained in the schedule — while he replied favorably to the special question in regard to habits, 'Are they sedentary or active?' and likewise to the other special question, 'Are they temperate or otherwise?' — neglected replying to the general question, 'Can you give any and what information respecting his habits?'

"The plaintiffs maintained, that even admitting (which, however, they did not) that the Earl was addicted to opium-eating, yet that the company, as they had accepted the life, without this *general* question as to habits being answered, must be understood to have accepted it at a venture, a view of the case in which the judge warmly coincided with the plaintiffs. Lord Mar's factor, coal-manager, gardener, game-keeper, and woodman, as well as a medical gentleman and three private friends, proved that the Earl was temperate in his living, never appeared intoxicated, or as if under the influence of narcotic drugs; had no complaint but rheumatism to afflict him, and that he went out occasionally to the distance of one, two, or three miles at a time. His friends further stated, that there were no visible marks of premature old age about him; and two of them, who saw him frequently till about two months before his death, declared that at first his habits appeared active enough, as he went about his garden and plantations, attended county meetings, and rose early; that he was a shrewd man of business, and given to study; that his intellects were clear and acute; his memory, originally powerful, unimpaired, and his disposition cheerful, unless when the state of his affairs was talked of, when he always seemed desponding and depressed; but towards the close of 1826, his friends all admitted a change in his habits, which, however, they attributed, to the great disappointment of his hopes. The unfortunate Earl, in short, about that time discovered that he was not worth a farthing. He gradually secluded himself from society, lay long in bed, and even went seven days without being shaved: his health and appearance, however, as the gentleman already alluded to avowed, did not appear to suffer.

"But then none of the witnesses above mentioned could speak with regard to his private or domestic habits.

"On behalf of the defendants, it was proved by the evidence of his lordship's house-keeper, that he was in the habit for twelve years before his death of swallowing some laudanum before he went out, whenever he was irritated, and at night when he went to bed; and that he had acquired the practice, t,oo of taking large doses, one of his house-keepers giving it to him occasionally when he went to bed, at a table-spoonful for a dose. It was also proved by some of his female servants that when he first got up in the morning he was so stiff as to require to lean heavily with his hands on his arm-chair to raise himself, and that he

was generally listless and in low spirits; that his appetite was so small that a partridge would serve him three days for his dinner, and that he sat drinking spirits and water till late in the evening, when he became not unfrequently intoxicated. Dr Abercrombie also deposed, that when he visited the Earl of Mar in 1825, for stomach complaints, he found him with a constitution enfeebled and broken down, although he had not any definite complaint. It was further proved, that about the close of 1825, and the early part of 1826, he had purchased at the rate of fortynine grains of solid opium and one ounce of laudanum daily; and that during the rest of 1826, as well as the two subsequent years, he purchased opium, chiefly in the form of laudanum, at the rate of two, two and a half, and three ounces daily.

"Thus the evidence clearly went to prove that a confirmed habit of taking laudanum really did exist; yet it is a curious fact, that of several eminent physicians, among them Dr Christison himself, with Drs Abercrombie, Alison, and Duncan, who were examined on the part of the Insurance Company, not one could prove from direct experience that such habit was prejudicial to the health. Mr MacFarlan, indeed, a surgeon-apothecary, deposed that he knew one person, a female, who used laudanum to the extent of two ounces daily, for many years, and who was about the age of sixty — of what disease he could not remember.

"The Lord Chief Commissioner summed up for the plaintiffs, and the jury decided in their favor, by finding the Insurance Company liable.

"But who will not agree with Dr Christison in his deliberately expressed opinion, that the verdict in this case was 'neither founded in reason, nor supported by the evidence?' The presiding judge, in his charge, made some most extraordinary assumptions: he neither considered that Earl Mar took opium to the extent that should make it important to the Company to know it, or obligatory on his lordship to reveal it; nor did the Lord Commissioner think it possible that opium could have been taken to a pernicious extent, when Lord Mar, to his personal friends and out-of-door servants, never presented any of those effects usually believed to arise from such a practice. On these points it is well observed by Dr C. that the judge must have been most lamentably unable to appreciate *one* fact given in evidence — namely, the habitual dose of a table-spoonful, sworn to by the housekeeper: nor could the court have been aware of the peculiar effects of the opium eater's allowance. 'It will be seen,' says the learned professor, 'from what will be presently said of the operation of opium upon persons addicted to it, that in this country, at least, the usual effects of the opium eater's dose is neither to throw him into a state like the excitement of intoxica-

tion from wine and spirits, nor to induce for some time heaviness and stupor, but simply to remove dulness and depression — to make him alert in his occupations and conversible in his intercourse with others — to occasion, in short, a state of mind and body which no one would suppose, at all events, no one not aware of the habit would suppose, indicated anything unusual in his condition at the time.' Here, we must confess, the Doctor is considerably at issue with *the* English opium-eater : M. De Quincy would hardly allow that the effect of *his* dose was merely to put him on a par with other people.

"With regard to the question, 'whether the habit of opium eating is detrimental to health and longevity?' Dr Christison gives us some most valuable information. He does not think that it is by any means a *necessary* consequence that the habitual use of narcotics must tend to shorten life : but such he infers to be the *general* rule, though it must be confessed that the exceptions are hitherto overwhelmingly the more striking in the inductive list. 'The following cases,' says Dr C. 'have been communicated to me by several of my friends, on whose information I can place reliance.'

"1. A young lady of five-and-twenty has taken it largely for fifteen years. It was first administered secretly by her nurse to keep her quiet and save trouble ; and the unhappy lady was subsequently compelled to keep up the practice for her comfort. She enjoys good health. 2. A female, a patient of mine in the Infirmary, a martyr to the rheumatism, took it for ten years previous to her fortieth year in the quantity of a drachm daily of solid opium. She then gave it up. Six months afterwards she was attacked with jaundice ; subsequently she was several times severely ill of rheumatism ; and she died in her fortythird year of consumption. This woman, however, led a licentious life from an early period. 3. A well-known literary gentleman who has taken laudanum with some intermissions for twenty years, and occasionally to the extent of nine or ten ounces daily, has now attained his fortyfifth year. He is spare in form, looks older than he is, but is capable of undergoing a good deal of bodily fatigue, and enjoys tolerably good health so long as he takes sufficient exercise. His allowance when I had last an opportunity of conversing with him was about nine drachms of laudanum daily. 4. A lady in this city, after drinking laudanum to excess for upwards of twenty years, died about the age of fifty. No information could be supplied of the disease of which she died. 5. A lady of the same age takes about three ounces daily, and has used it for many years. She appears to enjoy good health. 6. A lady, about sixty years of age, has taken it above twenty years, and is in good health. 7. A charwoman,

who had been in the daily practice of drinking two ounces of laudanum for many years, died at the age of sixty. The gentleman who has stated this fact, does not remember what disease she died of, although he dissected the dead body. 8. An eminent literary gentleman — [Here is our valued friend] — *I am informed* — [Why, — is not Dr C. acquainted with him? Of course, he has read *the* book] — has been in the habit of taking laudanum since he was fifteen; and his daily allowance has sometimes been a quart bottle (twenty six ounces) consisting of three parts of laudanum and one of alcohol. Enormous as this dose may appear, I am assured this fact is well known to his acquaintances. He is about sixty years of age, and enjoys good health. 9. A lady of seventy, now alive, has taken about an ounce of laudanum daily for nearly forty years. She enjoys tolerable health, and every year travels great distances to visit her friends. 10. An old woman of eighty died a few years ago at Leith, after taking about half an ounce of laudanum daily for nearly forty years; and she enjoyed tolerable health all the time.'

"These are, indeed, very curious facts, showing how little are *à priori* assumptions to be trusted relative to the affinities between opium and the human stomach; and we are persuaded, that if M. De Quincy ever exaggerates, it must be in dwelling so piteously on the distresses of his digestive apparatus. It is quite clear from the above list that a considerable number of opium eaters may attain a good old age, and that taken with caution, however largely taken, opium is no more injurious to longevity than addiction to ardent spirits is. Nobody will dispute the point with Dr Christison, that both drunkenness and opium eating are dangerous habits, and very liable to kill. He will not, indeed, allow that even a fair proportion of opium eaters live out their due proportion of life; but it is a remarkable fact that he cannot produce *a single case* in which the habit proved prematurely and decidedly destructive. The probability, however, is, as he says, that many really die at an early age, of the effects of opium eating, whose habits are never heard of, simply from the circumstance that they die young, before their secret is detected.

"How secretly the habit is sometimes indulged, may be conjectured from the following notes: — 'In case sixth, the lady's medical attendant was so completely ignorant of the habit existing, that, on being summoned to her aid on account of an attack of diarrhœa, he ordered an ordinary dose of opium, and was first warned of the true state of matters by the apothecary, to whom the prescription was taken, and who had supplied the drug for her daily use. In case ninth I have taken pains to ascertain the fact, that some of the lady's most intimate friends

are not at all aware of her having fallen into the habit. In case third I can state from personal observation, that even after being told of the habit existing, no one could discover it from the gentleman's appearance, conversation, or acts. I am further inclined to think, that in many persons unaccustomed to eat opium, this drug, when it does not induce sleep or produce disagreeable idiosyncratic effects, occasions tranquillity and brilliancy of ideas; and that such effects will be often experienced when its soporific influence is resisted by an exertion of the will. In all such instances, and notoriously in all opium eaters, the stage of elevation is followed by one of gloom, depression, and loss of appetite. But the opium eater usually takes care not to be seen at that time; and if he is compelled to appear in society, he alters the face of matters by renewing his dose.'

"To some it might appear strange that opium eaters are not harassed with costiveness, and perpetually obliged to have recourse to laxative medicine. Some importance was attempted to be attached to the circumstance that Lord Mar was very little affected in that way; but it was very properly abandoned at the time of the trial. The truth is, that a very large proportion of persons addicted to the use of opium seem to require no laxatives at all: the subject of case 5, for example, requires no laxatives; nor did the charwoman (No. 7) get laxatives at the shop where she got her laudanum. Yet the occurrence of costiveness after opium must still, in Dr C.'s opinion, be accounted the *general* rule — the cases of unobstructed bowels just alluded to being most probably no more than exceptions.

"And the conclusion to which his reasoning brings the professor is this, '*I cannot bring myself to think* that the habitual use of a drug which produces such permanent narcotic effects as opium, disorders subsequently the digestive functions in so great a degree, leaves those who use it habitually in so miserable a state during the interval of using it, as appears from their own confession, and leads obviously to emaciation and worn-out elderly appearance at an early period of life, *can be consistent in general with the enjoyment of health, and the chance of an average prolongation of the term of human life.*'

"The practical inference is, that *the opium eater's life is uninsurable;* and with this persuasion, Dr Christison thinks it his duty to remind both Companies' physicians, and medical referees, that the pernicious habit may exist where it is least suspected by medical attendants or intimate friends, and that it is by no means in general to be detected by the phenomena to which according to popular belief, it usually gives rise."

Iodine and Scrofula.

We republish the following paper on Iodine from the London Medical and Physical Journal, and commend the subject of it to the persevering experimental study of our brethren of New England, especially where a scrofulous constitution is at the foundation of most of the obstinate diseases we are called to encounter. We hope before long to be enabled to follow the brief notice of what has been done with it abroad, with some account of the results of the administration of it, by a distinguished practitioner in our own community, who has enjoyed and improved singular opportunities for testing its efficacy in a great variety of cases. E. M.

"Lugol has made mankind his debtor, and that to no inconsiderable degree, for having reversed a cruel sentence, and cut off the entail from another of those ills that flesh is heir to; an ill which had so long and so obstinately defied the power of medicine, that its cure became despaired of, and its victims forbid to enter many of our public hospitals, as their desperate cases were not considered susceptible of professional relief; but, thanks to modern science, scrofula can no longer be esteemed an '*opprobrium medicum*,' since Lugol has demonstrated, by a series of most satisfactory experiments, that many of its modifications are curable; i. e. submit as readily and as certainly to the treatment now proposed as any other chronic diseases are remedial by art.

"We scarcely know a disease that hitherto we have considered, on the whole, more deplorable than scrofula, and its hereditary character formed one of its not least alarming features; for scrofulous persons are, in general, remarkable for beauty, and scrofulous females are, of all, the most prolific; hence it has so greatly spread that we well recollect an old and experienced lecturer declaring, that if it progressed the next century as it has done during the past forty years, hardly a family would be free from the taint, and men's heads, he perhaps somewhat hyperbolically added, would be seen almost falling off their shoulders in the streets.

"When a disease is incurable, remedies on every side abound; i. e. when men of science fail to afford relief by rational means, men of art have an open field to impose on the credulity of the afflicted. Hence, for scrofula specifics have not been wanting; specifics infallible in their failure only: of their potency and value a fair judgment may be formed, when it is remembered that the *manus regalis* was the most celebrated by far, and indeed the only one that for many succeeding centuries, from Edward the Confessor's time to the accession of the Georges, maintained its credit, all others being less depended on than the royal touch;

and if the most valuable was so worthless, how *in*valuable must the rest have been.

" It is curious, however, to notice, among the mass of absurdities referred to, that the very remedy now shown to be so decidedly efficacious has, at various times, in various places, and in various unknown forms, been recommended for the cure of this disease, and that it exists in natural combinations nearly, in those proportions in which experience shows it can be most advantageously prescribed, and that even when iodine, the active ingredient of the bladder wrack and sponge, became separated, it at first was found less efficacious and manageable, merely because is was exhibited in less appropriate doses than it naturally existed in the Quercus marina or Fucus vesiculosus; and to a return to such moderate proportions does Lugol owe his brilliant success.

" Iodine is one of the most important additions which the vegetable kingdom has made to our list of materia medica: we have watched its effects in several cutaneous diseases, as well as in bronchocele, and shall now watch its still more important prowess in the cure of scrofula. Were this a proper place for such an episode, we would fain have described a case of rupia, which for years withstood all other means, and which seems now to be yielding to the use of iodine; and, among other cases, we recollect one large goitre, which might also have been regarded as an *iodometer*, so regularly and rapidly did it decrease during its use, and again increase on its disuse, whenever the constitutional disturbance, probably arising from too large doses, forbade its further exhibition.

" We have often regretted that, as many diseases once thought incurable, now are known to be curable, that '*incurable*' wards do not form a part of the general economy of our public hospitals, in which trials might be made for a sufficient length of time, and of a sufficient variety of means, to relieve, if not entirely to remove those affections, the nature and the treatment of which are the least understood, and the least under the control of medicine in its present state, instead of at first forbidding the entrance of the most obstinate and least known cases, and then, should any protracted ones occur, discharging, by a kind of proclamation, or hospital delivery, all who have exceeded their six weeks or two months; unless the physician or surgeon will make a formal application for an extension of time; when he is often required to state *how much longer* it will take to effect a cure; a question which, in such cases as those we now advert to, it is often utterly impossible to give an answer. But 'they manage these things better in France,' and, had we hospitals for 'incurables,' we should soon have fewer incurables to need them.

"It is time, however, to let the book before us speak for itself, and our first extract shall be from the report read by M. Dumeril to the Academie Royale des Sciences.

"MM. Serres, Magendie, and your reporter, proceed to lay before the Academy an account of a Memoir, presented by M. Lugol, doctor in medicine, on the Use of Iodine in Scrofulous Diseases.

"In the first place, we would remind our hearers that the scrofulous affections, long known under the names of 'cold humors,' or 'the evil,' constitute a class of those slow, unsightly, and often hereditary diseases, which strike despair into whole families, from the absolute rarity of their cure, and from the irremediable light in which they are regarded by the majority of physicians, and by the hospital regulations. Hence, also, the afflicted patients submit themselves to the illusive practices suggested by superstition; for, though medicine has successively tried all the remedies with which she is acquainted (the number, and even the absurd variety of which attest too strongly the want of a certain method of cure,) it must still be confessed that, up to the present time, an efficacious mode of treatment remained to be made known.

"Sometimes this disease is external and visible, and shows itself under the skin by swellings, which are slowly developed, become softened, burst, and remain ulcerated for a lengthened period, and thus produce callous and incurable scars; it takes its place in the substance of the integuments, which it renders deformed and disgusting; attacks the ears, the eyelids, the nostrils, and the lips, which become horribly tumid, or are corroded to such an extent as utterly to disfigure human nature.

"Sometimes, more deeply hidden, the scrofulous habit attacks the bones and their articulations, obstructs the canals which transport the lymph and chyle, or produces in the lungs, and most important organs, tubercles, which ultimately soften and degenerate into purulent centres, thus giving rise to serious morbid alterations in the living economy, which eventually yields to the effects of the disease.

"Such is an abridged view of the frightful malady to which M. Lugol, with zeal, perseverance, and success, has opposed a remedy, not absolutely new, but which had never previously been administered with so much method and precaution, to such a number of individuals at once, or with such evident and decided success.

"M. Lugol is one of the distinguished physicians attached to the Hospital Saint Louis, the only hospital in Paris where a great number of scrofulous patients are admitted for internal treatment. This circumstance explains how, in the short period of seventeen months, from the tenth of August, 1827, to the

thirtyfirst December, 1828, M. Lugol has been enabled to collect the detailed cases of upwards of 100 patients; in whom he, of course, found great variety in the seat and intensity of the disorder.

"Before your commissioners proceed to give an analysis of the memoir, they deem it right to declare, that they have not at all confined themselves to the scrutiny of its contents; but that they have seen, examined, and questioned the patients under treatment, and have also visited some of those reported cured or convalescent; that all the author's assertions have been found scrupulously exact; that many of the patients who were under treatment when the memoir was finished, have since been completely cured.

"Without restricting ourselves to the order followed by M. Lugol in his treatise, we proceed to make known its principal results.

"In the first place we may observe, that he uses two preparations of iodine: the one, exclusively intended for internal administration, is a solution of this simple substance in distilled water. The others are proper for external application, whether as ointments for ulcers, pomade for frictions, or watery solutions of varied strength, for collyria, lotions, and injections.

"The motives which have induced M. Lugol to employ by preference the aqueous solution of iodine, appear exceedingly plausible. So active a medicine can scarcely be administered in a hospital without inconvenience and uncertainty, except in the form of a drink. The alcoholic tincture and sirop of iodine present many disadvantages in the exact measurement and distribution of their doses, while a pint or half apint, of distilled water, containing in solution a little common salt, and a fixed quantity of iodine, affords us an easy, precise, and economical method of dispensing the remedy. Two degrees of this solution intended for the patients, and designated by the name of 'mineral water,' No. 1 and No. 2, (the first containing two thirds of a grain, and the second one grain of iodine in solution,) have furnished the means of dosing exactly from day to day, and of recognising the effects of what was previously employed: thus, half of No. 2 is the first allowance, the entire of No. 1 the second, and, finally, the whole of No. 2.

"As to the preparations intended for the external treatment: these are unctuous substances of a certain weight, and associated in determined and successively increasing proportions with iodine, ioduret of potassium (hydriodate of potash), or with the proto-ioduret of mercury.

"These simple means have sufficed M. Lugol for the treatment and cure of numerous cases, twelve of which, selected from the different species of scrofulous affections, are described

in the memoir. Three relate to ulcerated tubercles, cured in three, seven, and twelve months. Two cases are also described of ophthalmia and coryza, one of which yielded to a treatment of fortysix days, while the other was prolonged to the ninth month. A case of fistulous abscess deeply situated in the cellular tissue, has required nearly a year's care. Four cases are also recorded by M. Lugol of that frightful form of the disease most usually denominated 'dartre rougeante,' but which the author names the *esthiomenic* (or corrosive) scrofula. Finally, a case of scrofulous caries is detailed: this last form has generally been found very intractable. M. Lugol is only able to advance this single case of cure. It will be remarked, also, that the protoioduret of mercury was used, and that there still remains a small fistula as yet unhealed, but which appears to have a tendency to cicatrization."

"The cases referred to in the report we find are too numerous and too long for extract, although we had marked many for transference to our pages; but they are so interesting and convincing that we recommend them to our readers' perusal; suffice it for us to make known the general results, and we fully agree with the author that 'the importance of the facts related is great,' for they contain proofs that iodine, properly administered, is not followed by any untoward effects of emaciation, &c, as when improperly employed; and that numerous cases of severe scrofula have been entirely cured, and others greatly relieved; to part of which he refers in the following summary.

"Eugene Chateau, Francois Poire, Claude Michelot, Marguerite Bringer, are among the first scrofulous cases I treated. I did not place them under the same head on account of the cruelty of informing them that no hope was entertained of their cure.

"Richard, affected with a disease which had mowed down eight of her brothers and sisters, and who saw before her, in sad perspective, a scrofulous sister two years older than herself, and laboring under thoracic disease, with tubercles in her lungs.

"Adele Gandil, the offspring of a tubercular mother, and herself affected since the age of ten with scrofula in its worst form.

"Amand Olivier, under similar hereditary circumstances to Gandil, laboring under four fistulæ in the most dangerous vicinities, and which entitled us to apprehend the worst from the state of etiolation, debility, and emaciation, into which profuse suppuration of four years had thrown the unhappy patient.

"These facts, and a still greater number yet remaining to be described, place iodine in the rank of the most active and efficacious remedies which the art of healing possesses; its introduction into medicine should therefore be considered as one of the most precious improvements in that science.

"We have before our eyes patients attacked with scrofulous lesions, usually productive of a state of marasmus and colliquation, and which, under the influence of iodine, energetically resist the inroads of the disease. In some, even of this description, a marked tendency to cure is observable, too weak or transitory, it is true, to permit the encouragement of rational hope. Under this head are particularly placed cases of caries and of certain tubercular tumors of great magnitude, and which could be expected to yield but tediously to the influence of curative means."

"In the earlier cases, M. Lugol used an aqueous solution of iodine for internal administration; this he has subsequently changed for a combination of iodine with hydriodate of potash; it may, however, be the most advantageous plan to follow the example of the translator, and afford our readers a view of both the earlier and the later formulæ.

"*Ioduretted Ointment.*

	Old.	New.	No. 1.	No. 2.	No. 3.
"℞. Fresh lard . . .	lb. ij.	℥ ij.		lb. ij.	lb. ij.
Hydriodate of potash,	℥ iv.	℈ iv.		℥ v.	℥ v.
Iodine	℥ iv.	gr. xij.		℈ xiv.	℈ xvi.

"Afterwards I made use of a solution of iodine, which occasionally forms a valuable substitute for the preceding ointment, especially in scrofulous ophthalmiæ, and for the injection of fistulous canals.

"*Ioduretted Solution for external use.*

	No. 1.	No. 2.	No. 3.
"℞. Iodine . . .	gr. ij.	gr. iij.	gr. iv.
Distilled water .	lb. i.	lb. ij.	lb. iij."

The above solution the author has now abandoned for the following, which he finds 'the most certain and least inconvenient method of prescribing iodine for internal use.'

"*Ioduretted Mineral Water.*

	No. 1.	No. 2.	No. 3.
℞. Iodine	gr. $\frac{3}{4}$	gr. i.	gr. i$\frac{1}{4}$.
Hydriodate of potash,	gr. i$\frac{1}{2}$	gr. ij.	gr. ij$\frac{1}{2}$.
Distilled water . .	℥ viij.	℥ viij.	℥ viij."

"I commence the internal treatment with a half a grain of iodine; for this proportion I prescribe two thirds of the mineral water No. 1. In the second fortnight I gave the entire of this number; that is, three fourths of a grain daily, varying the dose within narrow limits according to the peculiarities of the case. During the fourth fortnight, or in the beginning of the fifth, I give a grain daily, and usually I continue this quantity to the end of

the treatment. In some cases I have prescribed one grain and a quarter; still more rarely I have increased the dose to a grain and a half, but I have never gone beyond this quantity daily.

"Another and advantageous form of preparing this mineral water on a larger scale is, by first making a concentrated solution of iodine in hydriodate of potash, and then diluting it with a sufficient proportion of water; thus,

"℞. Iodine	℈i.
Hydriodate of potash .	℈ij.
Distilled water . . .	℥vij.

"This solution contains one twentyfourth of iodine; poured into sixteen pounds of distilled water, it forms thirtytwo bottles of eight ounces of the mineral water No. 1. It is easy to understand that by diminishing the distilled water one fourth we compose No. 2, and by using three fifths of the quantity of water we obtain No. 3.

"Again, the concentrated solution now used serves for the administration of the remedy in drops once or twice daily, a mode of prescribing I frequently follow in my private practice. I commence by six drops given in the morning fasting, and six in the afternoon an hour before dinner, in half a glass of water flavored with sugar. Every week the daily dose is increased by two drops until it shall have reached thirty, or even thirtysix drops daily.

"For children under seven years old, I would recommend two drops twice daily for the commencement, to be increased gradually to five drops twice a day, morning and evening.

"From seven to fourteen years of age, I seldom order more then sixteen drops daily; I should not deem it prudent to exceed that quantity."

"*Ointment of the Proto-ioduret of Mercury.*

"The following formulæ express the quantities of the ingredients in the several strengths of the ointment which I am in the habit of prescribing.

℞. Proto-ioduret of mercury,	℈ij.	℈iij.	℈iv.
Fresh lard	℥ij.	℥ij.	℥ij."

"*Solution of Iodine for external use.*

"In my first memoir I only mentioned one solution intended for external use, but similar reasons to those which induced me to change the formula for internal doses have led to the use of the subjoined solutions, which are at the same time more permanent in their constitution, and uniform in their effects.

	No. 1.	No. 2.	No. 3.
℞. Iodine	gr. ij.	gr. iij.	gr. iv.
Hydriodate of potash,	gr. iv.	gr. vi.	gr. viij
Distilled water . .	lb. i.	lb. i.	lb. i.

"Injections may be made on the conjunctiva and the lacrymal passages with the solution; also, in cases of coryza or ozœna, it should be used several times a day, and is best applied by means of a syringe. In injections of the nasal fossæ, care should be taken not to direct too much of the solution towards the internal fauces."

"*Rubefacient Solution of Iodine.*

"℞. Iodine	. . . . .	℥ iv.
Hydriodate of potash	. .	℈ i.
Distilled water	. . . .	℥ vi.

"The solution should be kept in a bottle with a glass stopper, as it rapidly corrodes corks.

"This solution is very useful in cases where scrofulous surfaces require stronger excitement than usual, for example, to the eyelids and angles of the eyes in obstinate chronic ophthalmia, in coryza, or other forms of scrofulous disease in the nasal fossæ. It is most conveniently applied by means of pledgets of fine charpie. Even after a cure, I have frequently applied this solution to the deformed cicatrices characteristic of this disease, and it usually renders them smoother, less prominent and livid.

"The rubefacient solution may also serve two other important purposes, namely, the preparation of local baths and iodurettted poultices."

"The iodurettted baths have been found singularly serviceable by M. Lugol, and he warmly recommends them to be used in the treatment of many cases. He finds that wooden vessels are the best for containing the water impregnated with iodine; and the translator has given a very convenient table indicating the proportions of the several ingredients.

"We cannot close this volume without again expressing our gratitude to Lugol for his unwearied exertions, by which he has wrought so much good; and if the use of iodine in scrofula did not originate with him, he at least has made the subject his own by the success with which he has crowned it: neither can we lay down our pen without offering our best thanks to Dr O'Shaughnessy for giving these memoirs to the profession in their present condensed and improved form; indeed the author is under considerable obligation to him for the sound discretion he has used in abridging various prolix details, and in moderating exuberant passages, which, however excusable they are in the writer, and consonant with the genius of his tongue, seem somewhat strange to our more sober style, and little consonant with the rigidly didactic tenor of English medical details."

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Art. I. — Thymus Gland.

Thymi in Homine ac per seriem Animalium descriptio Anatomica, Pathologica et Physiologica, iconibus XXXIV. *ad Naturam delineatis illustrata.* Auctore F. C. Haugsted, M. D. Hafniæ, 1832. 8vo. pp. 286.

A treatise of such a size as the one at present under consideration, on a part which has so long been proved as out of the reach of physiology to determine its use, is rather a curiosity at the present time; and we have hitherto had reason to suppose that the functions of the thyroid and thymus glands, and the renal capsules,* were destined to escape the acumen of even the minute investigators of our age; as so many anatomical works have, during this period, been produced, without anything like a rational exposé of the uses of these bodies in the animal economy. We do not mean to assert that the thymus is as yet, in this respect, extricated from its obscurity by this treatise; yet the opinion of the writer is not only ingenious, but is fortified by experiments and observations, which together, give a great plausibility, to say the least, to his suggestions. Dr Haugsted has shown himself a learned comparitive anatomist, and from this source has extracted a fund,

* We must class these as having their uses undetermined, notwithstanding the assertion of a learned anatomist, that they are "filters by which any oil that is left in the arterial branches that are near the kidneys, may be separated and prevented from making its escape by the tubæ uriniferæ." — *Philos. Trans. Vol. V. Sir E. Home, on the Use of the Renal Capsules.*

which alone could have enabled him to offer the argument so confirmatory of his opinion. "Quo enim minus de organo aliquo cognitum habemus, eo magis cuique nostrum incumbit, indolem ejus in variis animantium speciebus variisque sub vitæ rationibus, quantum fieri potest, investigare, ut de usu ejus atque functione certiores evadere possimus."

While in Europe, by the aid of comparative anatomy, so many brilliant advances are being made in the knowledge of animal organization, we are astonished at the apathy of our profession towards the acquirement of this not only delightful, but necessary* science. We have a wide and tempting field before us, in the examination of what is in this respect peculiar to our country, and we trust that from the fruitful source, something may be gathered, which will show our trans-atlantic brethren, that we are not totally regardless of the opportunities around us.

Dr H. has divided his work into four parts, as follows: I. An anatomical description of this organ in man and other mammalia. II. An examination of the thymus in birds, reptiles and fishes. III. Its pathological anatomy, and, IV. The physiology of this organ.

I. *Thymi in homine cæterisque mammalibus descriptio anatomica.*

The author treats in several chapters on the figure, color, connexions, vessels, &c, which we shall pass over without comment, alluding to those facts which have a bearing on the author's peculiar views of the functions of this wonderful organ.

"Maximus semper reperitur thymus *in infantibus juniori-busque animalibus.* In adolescentibus vero non modo non increscit, sed sensim deminuitur." This he has found to be the fact in all mammalia; and he also affirms, "secundum *varias* porro mammalium *species* nonnihil variat thymus."

These two propositions are important to be established in his favor; but one still more so is, whether (as Tiedman, Meckel, and most modern anatomists contend as a fact,) that the hybernating animals vary from the others in having an increase of the thymus during their winter sleep. Dr H. asserts that what

* "Indispensables à la coordination générale de tous les états et de tous les phénoménes de la nature, les perfectionnemens de l'anatomie organique, et en particulier de l'anatomie comparative des animaux doivent être le terme des efforts de l'intelligence humaine et sa plus belle conquête sur les secrets de la création."—MECKEL.

has been considered as the thymus in these animals is not so, but are organs peculiar to them. The thymus in these, as in other animals, experiences the same changes, decreasing according to the increasing age after the period of lactation, but by no means enlarging during their winter sleep. The author gives the result of repeated dissections of porcupines, bats, and other hybernating animals, of all ages and at every season, and drawings of what he considers as organs peculiar to them, which have heretofore been mistaken for the thymus. His conclusion is, "anni tempus vero nullam in eum vim habere." We must refer our readers to the work for an interesting description of this glandular apparatus, which he thinks is possessed by the winter sleeping animals alone. He contends, in opposition to the opinion of Wharton and Cowper, that the thymus is of equal size in both sexes.

Dr H. has given a very minute detail of the structure, vessels, and nerves of the thymus. It appears to us astonishing, that any anatomist should not have been able to have demonstrated the nerves going to this body, as we have repeatedly satisfied ourselves, that it is amply supplied with them from the inferior cervical ganglion of the great sympathetic.

Our author has not been more successful than others in detecting an excretory duct. As it may be interesting to our readers to know how various and how singular have been the speculations (for such only they are) on this point, we will state them in a small space. Bellinger thought he discovered this excretory duct terminating in the submaxillary gland. Heister, that it opened at the base of the tongue. Duverney, that both the ducts of the thymus and thyroid terminated behind the os hyoides. In short, its duct is supposed to have been demonstrated (each having its advocate) as going to the æsophagus, trachea, stomach, mediastinum and pericardium, left súbclavian vein, thoracic duct, &c, &c. But to this day, all these have been but mere speculative suggestions, or the mistaking of one thing for another. "Oleum operamque perdidere."

In Chapter XI. he treats of the ratio of the evolution of the thymus in man and other mammalia. As the conclusions deduced from the size and increase of this organ have the greatest bearing on the theory, now for the first time suggested by our author, he has therefore presented in tabular arrangements, the results of his observations both in man and other mammalia. From these we learn that the human thymus increases during

the first nine months after birth, and then commences its diminution. In the cat, the greatest size and weight, was at about the thirtyseventh day after birth. In the dog, there was a regular increase, in both weight and size, from the first day to the termination of the first year. In ruminants, the same general results, and in many other orders which he has examined for that purpose; and also of the cetaceous mammalia, he asserts the same, confiding in the statements of those who have had opportunities for such investigations. From these facts, he draws the conclusion, "Maximum inde in statu fœtali in omnibus mammalibus capit incrementum; neque vero prima infantis œtate decrescit, ut minus recte contenderunt nonnulli auctores; sed haud exiguo inde in infantibus junioribusque animalibus incremento capto, inde demum, summa magnitudine per aliquod tempus servata, sensim extenuari incipit." We find it asserted in most of the manuals of anatomy, that the "thymus commences to decrease immediately after the birth of the child, and that even in infancy, scarcely a trace remains." But this is highly erroneous, and the fact of its increase after birth, as stated by some writers, might very probably have suggested the idea on which Dr H. has built his theory. Jourdan, (in the Dictionaire des Sciences Medicales, article Thymus) remarks, "non seulement le thymus n'est pas absolument plus gros dans le fœtus que dans l'adulte, mais encore des observations incontestables établissent qu' aprés la naissance il continue encore de croître pendant un laps de temps dont la durée n' a point été déterminée jusqu' a ce jour."

II. *Disquisitiones de thymo in avibus, reptilibus et piscibus.*

These are interesting to the comparative anatomist, and have an intimate connexion with the views of the author. The object of this part of his work is to show "quæ animalia thymo instructa sint, quibus desit."

In birds, this organ could not be found, as Dr H. says, and goes into a full demonstration, which here would not be the place to follow, nor shall we state the same results at which he arrived, respecting this organ in reptiles and fishes, except that we agree that the body described by Carus, as the thymus in the young crocodile, is not so, but is merely, as Dr H. states, an adipose mass, which recently we have had an opportunity of examining in conjunction with a very intelligent professional friend, and found the statement of the Doctor to be correct and verified in this dissection.

He deduces from his investigations, and closes the anatomical part of his work with the observation, "sola mammalia thymo gaudere."

III. *Thymi anatomica pathologica.*

This is an organ, which in this particular is rarely noticed, and like most others whose uses are unknown, their morbid affections are not investigated or attended to by pathological writers. Dr H. has gone very minutely into the subject of the diseases of this gland, which are those usually attendant on the parenchymatous tissues, as schirrus, steatoma, inflammation and suppuration and morbid enlargements. This last is not so very rare. There is in the Museum of the Boston Society for Medical Improvement, a preparation of a great schirrous enlargement of this gland, which caused much distress and a partial interruption of the functions of the heart and lungs; the nature of which disease was unsuspected during life. Allan Burns mentions three deaths from this cause, which happened from its pressure on the subclavian vein, and interrupting the entrance of the chyle into the heart, and thence producing an obstruction and enlargement of the mesenteric glands. It is therefore not among the least of the advantages to be derived from the investigation of such organs as the one in question, that it directs our attention in disease to even the most minute and apparently unimportant of structures, which possibly may elucidate a train of obscure symptoms, and the application of remedies may be made to that region where most of local service.

IV. *Disquisitiones de thymi physiologia.*

The hypotheses of the use of the thymus, we may well say with our author, have been multifarious and of the most opposite nature, since the time of Galen. For a knowledge of these, we must refer our readers to the book, as the simple enumeration would exceed our limits. We will only observe that the theory of Galen himself, continued to be adopted and predominated even to the commencement of the last century, viz. that the thymus is to sustain the descending vena cava "fulcrum est vasorum." Dr H. in his last chapter gives his views of the functions of this gland, and has undoubtedly followed the true course to arrive at his conclusion, "sententiam non e libris, sed ex ipsa naturæ animaliumque exploratione haustam." Having in his tabular summaries shown, "non a partu, sed post annum unum alterumque subsistat thymi incre-

mentum, juxta legem analogiæ *non fœtui, sed infanti lactenti* potissimum utilis et necessarius adesse videtur: adulto vero inutilis sponte evanescere," he proceeds to state his theory, which he thinks may be thereby deduced. We do not deem it necessary to apologize for the following extract, as it is both interesting and important.

"Itaque in eo prœcipue errare mihi visi sunt physiologi, quod omnem, vel prœipuum saltem, thymi usum fœtui tribuerunt. Quamquam enim sub finem vitæ fœtalis maxime evolvitur thymus, post partum tamen in infante non modo persistit, verum etiam increscit, magisque succulentus evadit, quod absque dubio utilitatem, infanti prœstandum, indicare videtur. Quamquam vero etiam in puerili œtate ad annum fere duodecimum satis magnus adest, post primum tamen vel secundum annum ita mutatur structura, ut ad functionem suam qualemcunque perficiendam minus aptus fieri videatur.

"Quæ cum ita sint, si ipsum thymi usum investigare volumus, minime sufficit, thymum ex organismo divulsum examinare; potius autem idem hoc organum cum ceteris organismi partibus intime conjunctum, velut partem organismi universalis considerare debemus, cum de usu ejus, e conjunctione sua et loco solito divulsi, æque parum ac de usu rotulæ, e machina aliqua exemtæ, judicare valeamus.

"Si ita rem contemplamur, omnia indicare vindentur, *thymum ad ea organa pertinere, quæ functioni nutritionis perficiendæ, vel saltem adjuvandæ inserviunt*, id vero non in fœtu, ut physiologi contendere solunt, sed potissimum *in infante lactente.* Organa enim classi mammalium propria vix alia reperiuntur tam notabilia, quam *mammæ* et *thymus;* quæ organa, cum simultaneo tempore, — lactationis dico, — illud quidem in matre, hoc vero in infante lactente, vigeant, eidem functioni perficiendæ dicata videri possunt; quæ functio, ni fallor, nutritionem infantis e lacte spectat. Sicut enim organa generationis in duo individua, marem et feminam, ita in infante lactente organa lactationis quoque in infantem et matrem distributa sunt, quoniam mammæ maternæ organis, digestionem infanti perficientibus, adnumerandæ sunt. In infante autem et in pullis mammalium lactentibus aliter quam in adultis procedit assimilatio, quippe quæ in illis simplicior sit. Vix enim requiritur processus chymificationis eâ, qua in adultis, ratione, quoniam chylum quasi paratum, — lac puta, chylo satis simile, — e matris ubere exsugunt. Cum autem eo ipso tempore in omnibus mammalibus maxime vigeat thymus, qui in ceteris

animalium classibus omnino nullus est, et cum per vasa lymphatica ductui thoracico conjunctus sit, ea sponte sese offerre videtur opinio, thymum *lactis assimilationi* vel animalisationi in infantibus mammalibus que lactentibus quodammodo inservire. Cum enim horum nutrimentum a solitis adultorum alimentis tantopere discrepet, etiam verisimilitudinis speciem habere videtur ca opinio, aliis organis in eis perfici vel saltem adjuvari assimilationem. Eam opinionem confirmare videtur thymi structura, et ejus post tempus lactationis decrementum; tum enim inhiberi videtur thymi functio, cum infans jam perfectior, neque amplius ab alma matre omnino pendens, osse soliti assimilationis apparatus nutrimenta variæ indolis ingesta in chylum vetere valeat, cum eo ipso tempore perfectiora evadant organa digestionis: proveniunt enim tum dentes, perficitur evolutio glandularum salivalium ac meseraicarum, hujusque minus, quam sunt ceteræ infantis glandulæ evolutarum, et ita omnino cum indole alimentorum jam mutari videntur organa digestionis, ut varia alimenta, infanti mensis apta, facile devoret homo adultus, qui idem, thymo carens, vix absque aliquo incommodo magna vescitur copia lactis, levis infantilis nutrimenti."

This theory, thus explained at some length, we trust our readers with ourselves, will consider the most rational of any that has been proposed on this subject. It is not a tissue fabricated from the imagination solely, like most of the others; but it is raised on actual anatomical demonstration. On one point, and that to us an original one, it has directed our attention to the true period of complete development of the thymus, viz. during lactation. He has refuted in an able manner those suggestions as to its use, which the old writers, not examining this structure in animals, have sent forth, (its mechanical office as a fulcrum) by showing that it is not found in some animals below the cava. If its extra development could have been established as existing in the hybernating animals, still its imaginary use as thus asserted could not be made out. Those who advocate this state of the organ conclude, that by its pressure on the lungs it induces the sleepy state, but certainly, reasoning on our knowledge of pathological anatomy, we should rather think this would induce great anxiety and dyspnœa. It may be proper to remark, that although Meckel mentions a thymus in young birds and in the adults of some divers, yet our author is supported in his opinion by Tiedemann and Ballanti, who view it as the thyroid in these animals. Therefore, if as we said before, it is a fact, that none but mam-

malia possess a thymus; that this is an organ which arrives at its maturity, and so continues in the period of lactation alone, and immediately after diminishes, the conclusion is a probable one, that this may be ranked among the assimilating structures to animalize the milk, or in some way to prepare it for the capacities of the infant. Birds and other animals, not having mammæ, are also destitute of the thymus, which fact establishes between these, some relation which until now has not been noticed. The inference is almost irresistible that they have a combination of action. They are both most fully developed at about the same time; the one in the parent, and the other in her offspring, and both diminish after the natural period of lactation. How this function of this point of nutation in the infant is brought about, the author confesses ignorance, and very wisely prefers to allow this, than to mingle mere speculations with the more solid anatomical deductions.

He has, however, made one wide step further in the knowledge of this organ. He has concentrated all that is known and published on this matter. His ingenious suggestions may be the means of exciting others to further research, and not only on this, but on the other still mysterious organs, it is important to prosecute similar investigations. The well of truth lies deep, but its depths are not unattainable by the persevering.

L.

Art. II. — Auscultation.

The researches of Laennec, if they had done nothing more, would have entitled him to the gratitude of physicians, by directing them to the cultivation of the sense of hearing in the investigation of diseases. Every one will acknowledge the valuable aid which auscultation affords us in ascertaining the vitality of the fœtus at the time of parturition and during the last two or three months of gestation, and of establishing the diagnosis in cases of twins. The following case is a practical illustration of the importance of this aid.

A lady rather advanced in life, had been in labor twentyfour hours with her first child. The labor had gone on regularly, but rather slowly, the membranes had ruptured, and the head had advanced to the os externum. At this period, a san-

guineous discharge commenced, which flowed from the uterus in considerable quantities whenever the head was pushed back so as to afford a channel for the fluid to pass. The blood was of venous color, and its appearance at this stage of the labor indicated a separation of the placenta. The stethoscope was applied in the right iliac region, and the pulsation of the child's heart was heard with distinctness and regularity. After about ten minutes more, the same phenomena continuing, the pulsation was heard more feebly, and at the end of half an hour from the occurrence of the hæmorrhage, the pulsation was feeble and irregular, occasionally ceasing for two or three beats. The child was now immediately delivered with great ease with forceps, which had for some time been held in readiness. The funis, in which pulsation had already ceased, contained only dark colored blood, and encircled the neck of the child with three entire turns, by which the placental end of the funis had become so shortened that the descent of the child detached the placenta. The motions of the child had not been perceived by the mother for two hours before its birth. On examining the placenta, a small portion of it only appeared to have been recently detached. The rest was very dark colored, and presented a smooth and coagulated appearance, totally different from the granulated structure of the recently separated placenta. The face of the child at the moment of birth, was quite livid; it made only a feeble effort at inspiration, and it was not until after frictions with warm brandy had been used several minutes, that it began to cry and breathe freely. Its vitality was evidently very nearly extinct, and probably if a delay in the birth of five minutes had occurred, it would have been totally so. The mother and child did well.

The asphyxia of the child at the moment of birth is sometimes so complete, that no evidence of life whatever can be obtained, except the slightest pulsation of the heart which can be audible. In these cases, mediate auscultation is a most convenient and ready assistant. The following instance exemplifies the fact:

A lady was delivered of twins after an exhausting travail in a state of weakness produced by chronic diarrhœa. The second child, the birth of which succeeded the first at a very short interval, was still-born, and so perfect was the apparent death, that it was laid away in the flannel blanket in which it was received, without the least expectation of the possibility of its recovery. The mother's condition at this moment became

very alarming from hæmorrhage and syncope, and nine minutes elapsed before we could bestow the least attention to the child beyond that of directing it to be kept warm. At this time the body of the child was pale, the inside of the lips livid, no pulsation could be felt by the hand on the ribs, and the child had uttered no sound, and made no effort at respiration. On placing the stethoscope at the lower part of the sternum, a faint pulsation was audible. By the assiduous use of the warm bath, of stimulants in the stomach and large intestines, and of inflation of the lungs, the child so far recovered as to breathe and cry, but, as is too frequently the case with resuscitated infants, at the end of thirty hours expired, apparently from congestion of the lungs. E.

Art. III. — Paxton's Anatomy.

An Introduction to the Study of Anatomy. By James Paxton, Member of the Royal College of Surgeons, Honorary Member of the Ashmolean Society, and Author of the "Notes and Illustrations of Paley's Natural Theology." With Illustrations. First American Edition, with Additions. By Winslow Lewis, Jun. M. D., Demonstrator of Anatomy to the Medical Department of Harvard University. Boston: Carter & Hendee. 1832. pp. 421.

As we believe in the prospect of a revival of anatomical knowledge among us, we rejoice at the publication of an anatomical work. Already have the profession begun to avail themselves of the provisions of the statute which legalizes the noble study in which they are engaged. It cannot be questioned that more dissection has been carried on by private practitioners, in this State, for their own instruction, and the benefit of their pupils, under the protection of the law passed in 1831, than for ten years previously, in violation of the severely penal code which prohibited the pursuit. The reprint of Paxton's Anatomy differs from most republications in this country, in being, as to its mechanical part, most beautifully executed. That this is no small commendation will readily be admitted by any one who has worried through the American editions of Bell's Anatomy, or Charles Bell's Surgery, where type and engravings are alike confused and painful. The attempt, in the treatise before us, is to produce a work which shall neither be too technical for the unlearned, nor too popular for the professional reader. As in Arnott's Elements of Physics,

and with a good degree of the same success, the attempt is made to explain the subject in accurate but common language. It would have been impracticable to have done this without recourse to graphical illustrations. Marginal wood cuts, therefore, are introduced upon almost every page to aid the descriptions. The execution of these engravings is, in general, very creditable, but, as must inevitably happen where the artist is perfectly unacquainted with anatomy, the representation is occasionally made to look like anything else but reality. There are a few such instances in the volume before us. The sacrum, the scapula, the ulna, the back view of the skeleton, show the defect we have alluded to. On the other hand, the muscles generally are neatly and distinctly delineated, and the plate of the muscles of the lingual region, at page 176, has uncommon excellence. The description and representation of the ligaments, a department of anatomy always perplexing to the learner, but of immense consequence to the practitioner, is executed in a most creditable and useful manner. Of the share of credit which in this American edition belongs to our friend the editor, we are not qualified to judge, as we have no English edition to compare with it, and as he informs us in his preface, that he has preferred, judiciously, as we think, to embody his additions with the work, rather than disfigure it by placing them as notes. The notes are few in number, and so unimportant, that they might as well have been dispensed with. The arrangement adopted is that of Bichat, reducing, however, the number of textures to twelve, by throwing together the medullary and osseous, under the head of the osseous system, the arterial, venous, and lymphatic, under the head of the vascular system, &c, which is perfectly allowable in a general view of the structures. The present volume contains five of these divisions, and ends with the termination of the vascular system.

There is one class of scientific readers, to whom we most cordially recommend this work. We mean the lawyers. We should rejoice to put them in the way of obtaining some clear, elementary views of anatomy, so that when our professional duties coalesce, as they not unfrequently do in our courts of justice, they may be enabled the better to understand and the better to employ medical evidence. On the whole, the work is an important acquisition to the general reader, and, as a first book, to the medical student.

Art. IV.—Boston Society for Medical Improvement.

[This is a comparatively recent institution, consisting of a considerable number of the middle aged and junior members of the profession who have associated for the purpose declared in the title of the society.

They meet once a fortnight and occupy a few hours together in colloquial discussions on medical topics, in written or verbal narrations of anything curious or instructive in the experience of the members during the recess, or in listening to the reports of Committees which have been previously charged with the investigation of particular subjects. A fund of interesting professional matter is thus accumulating—gathered at each meeting, fresh from the recent experience of an intelligent corps of practitioners,—from which the Editors of the Magazine, through the liberality of the society, will be permitted to draw for the gratification of their readers. The following Report, from the files of the Society will be found to contain a very faithful and entertaining account of the medical peculiarities of the period which it embraces.]

Report of the Committee on Diseases prevailing from January 6, to May 25, 1832.

A committee was appointed some time since by the Society, consisting of Dr Stevenson and the subscriber to report on the diseases of the season. That committee now ask leave to report. The report begins with the week ending January 6, 1832, and ends with the week ending May 25th, 1832. The committee, in thus extending their report to a third of the year, was anxious to present a fuller statement of the epidemic diseases of the season, in the thought that a decline would soon be manifested in them. This last has not been the case, but as the record had been made up to the time referred to, it was thought best to leave it as it is.

The weekly bills of mortality have furnished most of the details. They are principally to be relied on for the number of deaths, and perhaps sexes. In other matters they are necessarily defective. Physicians are not called on by law to leave the name of the disease before interment is permitted, as is the practice in some of our cities, and but little dependence can be placed on the accounts of friends. The superintendent of burying grounds told the committee that it is now a rare thing for the undertaker to return the disease when he could get no information from the friends of the dead, and in case of an existing epidemic it was a common practice to give its name to the case where no better means of designation could be arrived at.

The committee find that the whole number of deaths for the time specified is 607.

Males	306	
Females	301	
		607

DISEASES.

Scarlatina	107
Measles	46
Common Pulmonary	141
Croup	19
Hooping Cough	6
Influenza	21

The committee have in the above particularized such diseases as are always most interesting, some of which are peculiarly so at this time, as well on account of the time they have continued, as for their mortality; scarlatina and measles. One of the above titles is common pulmonary. This includes marasmus phthisis. Now deducting this, many simple acute cases remain, and beside there are doubtless many in the same list, which were sequelæ of the prevalent epidemics of the time, measles and influenza.

As far as the memory of the committee serves, the catarrhus epidemicus of 1832 has not been more universal than was that of 1825. There is no question however with them that it has been more severe, as well in itself, its own proper symptoms, as in the accidental complications it has so frequently manifested. These last have been inflammation more or less severe of the lungs themselves, or of the pleura, sometimes both. The greater severity of the disease, from whatever cause, may be inferred from the single fact that active treatment has been frequently demanded; and further that very grave disease of the lungs has followed influenza, and to an amount unknown to the epidemic of 1825. It is believed that such results have sometimes followed very severe attacks of the epidemic in which the treatment was active. Cases however have been seen, which were apparently less violent at first, and were less actively treated. In these, severe chronic disease of the lungs has sometimes followed. In others hemicrania has been the sequel. The diseases of the lungs which have been more particularly deserving of notice are chronic catarrh with symptoms of marasmus, and pneumonitis, accompanied in some instances with great and distinct hemoptysis, and in others with

pulmonary abscess. Some cases of both of these have at length recovered, though at first of a very unpromising character.

Measles have been very rife in the very midst of two other epidemics. Of this disease the report gives 46 deaths. Cases of measles have been met with in which grave cerebral disease has been early manifested; sometimes this has been seen at the earliest periods of the disease, and one case at least is in the mind of the committee in which this very soon became the leading difficulty; this patient died on the second day, lying comatose from the beginning. In adults the measles have been, as is common, very severe. In some of these catarrhal disease of a decidedly phthisical character has followed. In one case measles was followed by disease of the brain accompanied by symptoms of most ardent fever. This patient lingered for some time in extreme suffering, and at length died after some days' continuance of symptoms of compressed brain. Two cases at least are recollected in which fatal croup followed measles. Treatment in this case was singularly powerless in even palliating the symptoms. Leave was not granted to examine the body.

Scarlatina presents us with the greatest mortality of any one disease. Yet can we regard its whole amount as great when we take into the account the almost universal prevalence of the disease? Who amongst us, nay, of our own number, who has not suffered from it in some form? Its mortality can hardly be called great then if its extent have been thus wide.

Some facts relating to this disease are sufficiently interesting to be noticed.

First. Its epidemic history in this part of America.

From our earliest times scarlatina has been known to New England. It has always appeared as a wide spreading, and very destructive epidemic. The earliest paper to which the committee refer is one by Dr Wm. Douglass of this city. The disease was called "miliary fever with sore throat." It appeared in Kensington, New Hampshire, in May, 1735, and was in Boston in August or September of the same year. It was ascribed to "some occult quality of the air," and was not considered contagious, since physicians neither took it, nor carried it to their patients. The number of inhabitants was then about 16,000,—of these 4000 had the disease, and 114 or one in thirtyfive died. There is an air of detail in this short history which gives it a character of accuracy which our records of the recent epidemic can hardly possess. The population of

Boston is quadruple what it was a century ago, and what was easily done then with regard to numbers sick of any disease could hardly be done now, however complete might be the concert of those most interested to do it.

Other writers, among whom may be mentioned Bulfinch, have left accounts of other epidemics.

In later times scarlatina has been epidemic here. In 1793 and in 1801 it was in Boston in a very severe form. Since then there have been occasional visitations, and since the latter part of 1830 to the present time, the disease has been constantly with us, and in a severe and fatal character.

Secondly. The character, or characters of the present epidemic.

On its first appearance, as far as the committee recollect, and the memory is distinct concerning many cases, scarlatina was more inflammatory, and less mortal than in the last few months. By more inflammatory is meant, that the disease in the throat was most severe in the tonsils themselves, their proper texture, then in their mucous coverings. The sufferings of patients, especially of adults, and individuals not strictly infants, were very great; the difficulty of swallowing and of breathing in some instances amounting almost to agony. The rash, especially in adults, was not at that time so common, as later. When there was eruption it was more general, and of a brighter color. There was at that period of the epidemic then, more suffering, and less danger.

The progress of the epidemic has been marked by much that is curious and interesting to the practical student of disease. The committee would first speak of the contemporaneous existence of two or more epidemics. This in itself would be sufficiently deserving notice; but there is more than this to be recorded. Not only have two or more epidemics existed here at the same time, and at least two of these, specific in their nature, and affecting the whole system and parts of it in a specific manner, but they have interchanged or displaced each other in the same patient, one for example beginning, and having continued for a day or two, has subsided under the invasion of the other,—which other having gone through its regular course, the first has again manifested itself by its usual symptoms, and then gone regularly through its own proper stages.

This, as far as the committee recollect, is quite anomalous. In one case showing the succession of two diseases, measles first appeared,— it went through its course, when directly on its

heels came scarlatina. This went on and off well, and just when the patient seemed perfectly safe, the brain was violently seized, and after three or four days of violent suffering, and deep coma, this child died. Suppuration, and extensive softening of the brain were discovered on dissection.

The committee have in mind cases in which various diseases appeared as sequelæ to scarlatina. The rarest was erysipelas. This happened in the children of the same family, at times, in others only in a single instance in a family. In one case the succession of morbid phenomena is quite remarkable for its variety. This was a very vigorous boy of 11 years. The throat was not very severely attacked, but the rash was strongly pronounced. On the subsidence of the rash, say between a week and ten days after, severe pain attacked the abdomen,—then swelling with fluctuation, distinct ascites—next an asarca of the lower extremities, urine coagulating from commencement of ascites,—next rheumatic pains of the legs, then erysipelas of the face and head, attacking the left side first, closing the eye,—and when the disease declined somewhat here, it was by extending itself across the nose to the right side —it gradually disappeared, and the patient after a very protracted convalescence recovered.

In another case, in which very severe inflammatory disease in the abdomen followed, convulsions occurred during convalescence from this, and the child, about 11 years old, died in 24 hours. The brain was found gorged with blood, effusion between the pia mater and arachnoid, —and much water in the ventricles. The substance of the brain manifested no remarkable alteration.

The disease has frequently proved fatal under symptoms of croup. In these cases the local disease has from the beginning been very severe, —the eruption in many not striking, —in some the constitutional symptoms less than in apparently milder cases. The patients have died with symptoms of suffocation, and dissection has discovered great disease in the throat and larynx, with false membrane in the trachea.

Another sequel, if not conversion, is into purpura. The committee can report at least two instances of purpura succeeding sore throat. In one of these the disease was scarlatina of a very grave form. It was followed by very severe pneumonitis. The species of purpura was hœmorrhagica. The second was Purp. Simp. The disease in the throat was highly inflammatory,—severe Cynanche tonsilaris threatening suffocation.

The tonsil broke with great relief. Then came on pain in the lower extremities most severe in right thigh, and to this succeeded the purpura, much confined to that limb. This disease of the thigh terminated in a very large abscess, which was very painful, and from which a most offensive bloody pus in great quantities was discharged by puncture. Doubtless in this case the blood had been first effused into the cellular texture; inflammation and suppuration followed. The fœtor was doubtless owing to the blood so long extravasated from its vessels, and decomposed. The cases were both in females, and both recovered. There is still another class of cases quite distinct from all the above, to which the committee beg especially to allude. They refer to those cases in which death has taken place within a very short period from the attack, and in which the symptoms of the epidemic have been but very slightly manifested. In fact, at the beginning of these melancholy cases, the symptoms of disease have been so slight that neither friends nor physician, should one be called in at the invasion, have seen any cause for apprehension. In some of the cases in question, the patient has principally excited interest from becoming dull, listless and heavy, at first being roused without much effort, but then soon falling away into an almost comatose sleep. In this way, with most rapid pulse, more or less dispnœa, coldness of the surface rapidly succeeding great heat, sometimes with vomiting and purging, life has gradually become extinct. In other cases of this rapidly terminating class, the disease has exhibited acute symptoms for a time, when convulsions, or coma, has rapidly supervened, with most sudden and unlooked for death.

In one case examined after death, the peritoneum showed that it had sustained the weight of disease. No evidence was exhibited of such disease during life.

Much attention has been attracted to these cases from the circumstance of the class of individuals in which this form has appeared. But these few cases are by no means the whole. Similar ones have been again and again noticed by different physicians, and in different classes in the community.

The committee have now finished their report. They have not spoken concerning the treatment of the diseases to which they have more particularly referred. This did not come within their commission, which was to state what diseases have prevailed since the beginning of the year, more especially epidemic diseases. They have trespassed so far beyond what specially was their duty as to mention some of the more strik-

ing peculiarities which the diseases of the season have exhibited. They conclude with hoping that these have been sufficiently interesting to make pardonable the length of their report. W. Channing.

Boston, July 9th, 1832.

Art. V. — Hospital Gangrene.

The May number of the American Journal of the Medical Sciences contains the Report to the Trustees on the state of the Medical Department of the Baltimore Alms-house Infirmary, for the year ending the 30th of April, 1831, by Thomas H. Wright, M. D. Physician to the Institution. Dr Wright has been a regular and copious contributor to the pages of the above named Journal, and his papers are among the most valuable which have been given to the profession through the medium of this periodical. Excepting a few observations relating to the general state of the establishment, and a statistical table for the year, the present report is devoted to the history, treatment, &c, of a disease bearing a very close analogy, to say the least, to that which has been usually denominated hospital gangrene. We should say, indeed, that the affection described by Dr Wright, as it manifested itself in the Infirmary during the winter of 1830—31, differed in no greater degree from the hospital gangrene of European authors, than frequently exists between the appearances of any epidemic disease as it shows itself in different seasons, and under various atmospheric or other modifying influences. The same disease again made its appearance in the Alms-house in the winter of 1832, and at this time with all the character of hospital gangrene as it has been commonly described. We propose to present our readers with a condensed abstract of Dr Wright's paper.

The disease in question has been considered by the few eminent surgeons who have seen and described it, as of hospital origin and highly contagious in its nature. Dr Wright differs in this respect from the European surgeons. He says—

"When the disease first appeared in our wards, (in November 1830,) I thought it was, what its name imports, truly hospital gangrene; and we immediately adopted every probable means of extinguishing its source. These means were — more complete ventilation; removal of all possible nuisances, and of everything

which, by imbibing foul air or gases, might become a secondary source of the same evil; additional cleanness of apartment and person of all patients, and the free use of supposed disinfecting agents. *I soon changed this opinion as to the origin of the disease, and pronounced the cause to be essentially atmospheric; or, as physicians speak, epidemic.* I was led to this conclusion from reflecting on the fact, that the diseases of the season elsewhere, in the city particularly, were characterized by a very remarkable and unusual tendency to bad forms of local complication. The fevers were generally of a low type, and the prevailing epidemic, scarlatina, was often attended by ulcerous and gangrenous affections eminently destructive. Troublesome and painful eruptive disorders, (some wholly new, as eczema,) were very common, and local injuries were apt to assume a bad condition. Even leech-bites and blisters were so frequently followed by gangrene, that some physicians on that account abandoned their employment for the time. It was not long before my opinion on the cause of the disease in our hospitals seemed to derive confirmation from the fact, that a number of cases were brought to us from the city with extensive gangrene, as completely formed, and as eminently bad as in any of our own unfortunate patients. Other diseases, debilitated habits, hospital confinement and air, no doubt gave to our patients a strong predisposition to be affected by a noxious atmospheric state, and favored its worst influences. This is the operation of hospital life, under all circumstances; but I am fully persuaded that there was no *special* or *peculiar poison generated in our wards* which gave origin to the blighting mortification that spread among their inmates during the past winter, and not yet wholly extinct. *It is to meteorations agency, not to local miasm*, I would refer the cause and existence of the formidable disease by which we have suffered so greatly. This conviction on my part, however, ought not, and did not, lead to any relaxation of vigilance on the score of a wholesome police; nor does it lessen at all the importance of endeavoring to suppress every source of evil influence upon the health of hospital patients. While I cannot realize the truth of the general opinion, that what is called hospital gangrene is essentially contagious, I by no means doubt that it is eminently contaminating. Every case of foul sore in a ward adds its own proper, though not specific vitiation, to the atmosphere of the place, and becomes decidedly injurious to others who lie under predisposition to have bad sores; while the individual, subject of the affection in question, can have scarcely a chance of improvement in an air impure before, and rendered more unwholesome by his own morbid, general, and local excretions. In every view of the case then, it becomes infinitely important to be able to separate the subjects of

bad local affections from others, and for the safety both of the one and the many to put the former by himself. After all the resources of art have been taxed for the means of arresting the disease I have just referred to, nothing ever has, or ever can, so effectually contribute to its check or cure as removal into air fresh and pure as can be obtained. I would say that no ventilation, no care, no cleanliness, no antiseptic or disinfecting agents, nor any other expedient, can make an atmosphere sufficiently pure for the subjects of bad local affections, if that atmosphere is habitually used by a multitude of others, particularly of others themselves in a state of disease.

"We treated forty cases of malignant gangrene, the disease above named and were able to save only nineteen. A few were nearly cured once or twice; but relapsed and sunk. Some of our patients finally recovered, after two or three successive attacks."

We have already alluded to the differences between the character of the disease as it appeared at Baltimore and common hospital gangrene. The following is a description of the latter disease by Mr Hennen, "one of the most experienced, judicious, and candid surgical writers of the age; a man who has honored his country, his profession, and himself, by the extent and value of his official labors in an arduous public duty; and not less by the zeal and fidelity with which he has collected and reported much instructive matter, and many interesting facts, forming an important addition to the general stock of medical and surgical knowledge."

"Hospital gangrene is introduced by primary constitutional disorder. The subject, who is understood to have some wound or ulcer, hitherto in a healthy state, complains of severe pain in his head and eyes, of want of sleep, and loss of appetite, and these feelings are accompanied by quick pulse, and other signs of fever. His wound, or ulcer, previously healthy, and good looking, becomes tumid and painful, loses it florid color, and puts on a dry and glossy coat. This is the first stage; in the next, the febrile symptoms increase; the skin around the sore acquires a high florid hue, which soon changes to dark red, then bluish, or livid, and at last, black, with vesications about the part, while the rest of the limb is disposed to œdema. These appearances were present in the first twentyfour hours, and at this period also, the wound or ulcer, whatever its original shape, invariably assumed the circular form. The sore now acquired hard, prominent, ragged edges, making a cup-like appearance, with points on the margin, of a dirty yellow hue, while the bottom of the sore was lined with a blackish slough.

"The rapid progress and circular form of the ulcer were highly characteristic of hospital gangrene, and obtained universally whatever the seat or shape of the primary sore. The originally affected part was always the centre of the wide-spreading diseased circle. The discharge from the part in the second stage of gangrene became dark and fœtid, and the pain was extreme. The gangrene still advancing, the increasing cup-like cavity was filled with fresh sloughs, rising above the surface, and the erysipelatous livor and vesications around the sore increased; while chains of inflamed lymphatics could be traced from the sore to the nearest glands, there exciting inflammation, suppuration, and a new nidus for gangrene. The face of the patient assumed a ghastly appearance; his eyes became deeply tinged with bile; tongue loaded with brown or black fur; appetite gone; pulse sank, and proportionally accelerated. In this stage the slightest change of posture, or the least examination of his sore, put the patient to great torture, and any movement of the affected limb was followed by tremors and spasmodic twitches. When those nervous affections came on, the bravest soldiers betrayed the greatest imaginable impatience and depression of spirits. Men who had borne amputation without a groan, shrunk at the washing of their sores, and shuddered at the sight of a dead comrade, predicting their own sudden dissolution, and sinking into sullen despair. The third and last stage was now rapidly approaching; the surface of the sore was covered with bloody oozings; repeated and copious venous bleedings came on; the sloughs were successively cast off, and succeeded by others, showing, when detached, a surface studded with specks of arterial blood. At length an artery sprung, which commonly burst if tied, and when compression was employed, the whole limb swelled and passed into gangrene. Incessant retchings, with coma, involuntary stools, &c, closed the scene."

Dr Wright says —

"In many, even the large majority of gangrene cases in the Baltimore alms-house, the patient neither showed nor acknowledged any unusual indisposition, until after his sore betrayed in its appearance unequivocal marks of established and advancing degeneration. Not one of all the early and bad cases of gangrene in our wards was ushered in, or announced by distinct constitutional signs of fever. No subject of the affection complained an hour in advance of the most evident change in the state of his sore, of chill, head-ache, or any particular disorder, of which fever made a sensible part. Many, and those among the worst cases afterwards, neither knew nor suspected that any thing unusual had occurred to them, until some part, often one half, of an extensive ulcer, looking and feeling well at the previous dressing,

was already blighted and sloughing. In all these instances, the palpable constitutional disorder, which afterwards showed itself more or less severely ensued to the altered state of the part, and increased gradually until it was distinctly revealed in the changed and sickly look of the patient. Even then, the dull dejected countenance and listless manner, often bespoke more indisposition than the individual acknowledged himself to feel."

"The local characters of the two affections, the gangrene abroad, and the mortification in our wards, were not less strongly contrasted than the manner or degree of constitutional disorder, by which change in the part was attended. The incipient gangrene of the former was announced by a *tumid*, painful, dry, and glossy state of the skin around the sore, which were soon followed, first by a *high florid red*, speedily becoming *dark* or *livid*, and ending in *vesications;* with *hard*, *prominent*, and ragged edges, &c. When the ulcers of our patients were falling into gangrene, none of the signs were present. Often one half of an extensive ulcer was already dead and sloughing, while the marginal integument of the sore was thin and soft, rather paler than usual, or else quite natural in appearance. Sometimes the centre, again part of the circumference of a sore, was found suddenly blighted and dead, and as yet, every part, save the degenerated spot, was fresh-colored, granulating, and apparently sound. When, at the next dressing perhaps, the whole sore was found cankered, and every trace of life extinguished on its surface; the bounds of the decayed structure, if still definable, were flat, rather fallen in, than raised or retorted, and seldom even a blush of color fringed the still dying textures. Neither was there at first, in our cases, any general swelling of the limb, no primary œdema, and never vesications; the whole member, in all the early periods of the disease, was pale and flaccid; yet about the worst stage of the affection, the seat of gangrene was sometimes bordered by a pale œdema of small extent, and when sphacelus had nearly encircled a limb, so as to interfere with the life of the parts below, the foot for example, the latter then swelled very much, and almost immediately passed into total death.

"It is further alleged of hospital gangrene, so well described by Mr Hennen, 'the wound or ulcer, whatever its original shape, invariably assumed the *circular form*;' and this was regarded as a prominent diagnostic of the particular affection. The same feature was never recognised in the endemic gangrene of our wards in the winter of 1830, nor was there any obvious tendency to any definite form."

"As we had nothing of the circular figure of gangrenous ulcer, there was, for that reason, none of the cup-like appearance attributed to hospital gangrene abroad. There the original sore is

said to have been always the *centre* of the spreading diseased circle. In our wards the mortification was always undefined as to form, and not unfrequently one half, especially the upper of the original sore, would be alive, and tolerably good looking, when the other half, and much of the extremity below the part previously diseased, was extensively killed."

The disease at Baltimore differed in some other respects from the gangrene cases abroad. The strong expression of distress and suffering in the countenance was usually present, but not at the *commencement of the disease*, and whatever might have been the cast of countenance in the acute stage of suffering, all had a tendency to that which became, sooner or later, the predominant character of face, in all the bad cases; profound despondency and utter recklessness of self and everything. The *eyes* were never tinged with yellow. The *tongue* was never loaded with a dark or brown *fur*, nor had it the smallest quantity of sordes of any kind upon it. In bad cases the tongue had a dry, red polish, as in the glossitis of initation, which continued throughout the disease. Dr Wright says, and the sentence, by the way, is peculiarly characteristic of his style and manner of expression; "It was always the tongue *of gastro-intestinal mucous irritation, rather than of gastro-biliary congestive derangement.*"

"The disease first showed itself late in November, but did not multiply rapidly until December, January, and February. Its more common form of invasion was as follows. Some patient having an extensive ulcer of the leg, hitherto in a slow, but regular process of healing, complained of having suffered through the previous night unusual *misery* in his sore, which prevented his sleeping. His countenance was now more red, or perhaps paler, than common; with an expression, either of sadness or fretfulness. His pulse rather quick, skin slightly warmed, tongue clean, moist, but somewhat reddened; head a little confused, but not painful; appetite impaired, but no sickness of stomach. Such were the constitutional signs generally in patients who, during the reign of endemic gangrene in our wards, complained of having felt *unusual misery in their sore.* Throw off the dressings now, and you would almost certainly find the following state of parts. In the centre often, sometimes on the side, of a large, well-granulated ulcer, you see a *dull white patch*, occupying about one fourth the superficies of the sore. This part had been a good, granulating surface the day before, it was now *dead.* The integument bordering the ulcer was unchanged, neither thickened nor inflamed, but keeping as yet its thin cicatrizing as-

pect everywhere, except, perhaps, nearest to the blighted spot. Even the granulations of the rest of the sore were not otherwise altered than in looking paler and deeper red than common. In the next twelve hours the central or lateral slough had extended itself in the one case, to the original *inferior* limits of the ulcer; or, in the other, included a considerable portion of the adjoining integument and cellular tissue. Now the parts below, or at the side of the former bounds of the ulcer, which had thus become implicated, thickened up as they passed into death, but they did not inflame: the blight was too sudden and complete for the intermediate state which inflammation imports. Up to this stage of the disease the dead parts were *dirty white;* these sloughs were now about to be cast off, and in the rapid decomposition of the decayed textures, some parts became *dark*, and imparted a *blackish* tinge to the sore and the dressings. When this coloring matter was washed away, the surface underneath was pale red, coated with much tenacious mucus. In the further progress of gangrene, the integument and cellular tissue above the instep, and on the inside and outside of the tibia, (the leg was the common seat of the affection,) conducted the sloughing process downwards, and if it extended below the ancle, or penetrated deep by the side of it, the whole foot was speedily killed. Some patients lingered out a few miserable days after the total death of all the lower parts of the limb; in most, the powers of life failed before that lesion was fully effected."

"The constitutional state in most of the cases was such as I have described. In the first stage the patient was uneasy and fretful, looking anxious and impatient, complaining of misery, the common expression, in his sore, and earnestly solicitous of some relief. His pulse was quickened, without being greatly accelerated; skin a little warmer or cooler than natural; face flushed slightly, or more pale than usual, but never sallow; tongue somewhat reddened; appetite impaired; stomach not sick; bowels in no way disordered. In the second stage, pulse frequent, but small; skin dry, rather cool; countenance dejected; frequent moaning; less complaint, (with some exceptions,) of pain in his sore; extreme dread of having it dressed; indifference now about food or drink; seldom nausea or sick stomach; bowels inclined to be loose; tongue redder and dryer, slightly tremulous; face dusky or pallid. At this stage rapid emaciation of the body and limbs was apt to occur. In the third period of the disease symptoms the same, but all aggravated. Patient sunk down in bed with his face covered; breathing thick, rather fast; countenance haggard, with a cloud of insensibility and fading consciousness — the vestiges of some delirium the night before; arousing slowly, with look and manner implying reluctance to be troubled; and, after

undergoing necessary attention, relapsing at once into the state of apathy, out of which he had just been raised. In this condition, diarrhœa, amounting almost to incontinence, had supervened. Now medicine or food could only be given by a degree of mild coërcion; the patient asked for nothing — thought of nothing — desired nothing — but to lie still, and die. Indifference to life came to be a marked and predominating final effect of the bad cases of gangrene in our wards. The fatal cases varied in their course and duration from four days, the shortest period, to seventeen, which was exceeded only in one or two instances. Convalescents observed nearly the same; some recovering promptly, others tediously.

"The fœtor of this gangrene was particularly strong, and could scarcely be quenched or overruled by the most powerful antiseptics — the chlorides of lime and soda. It was not the ordinary stench of putrescent animal matter, but a pungent, ammoniated exhalation, peculiarly characteristic of this affection, and distinguishable from every other odor. It escaped freely through all the coverings of the sores, and might have served, before exposing the ulcers, as an almost certain evidence of their condition. This offensive effluvium appeared to be eliminated only while gangrene was in progress, ceasing always, I think, to be perceptible as soon as further decay of the living parts was arrested, although much dead structure was yet about the limb imperfectly detached."

A guarded antiphlogistic plan was adopted for the constitutional treatment, consisting of applications to the skin, calculated to diminish or increase its temperature and action, as the case might require, and of the internal use of calomel in medium doses, combined with Dover's powder or opium, and followed with saline purges, and the alkaline or neutral solutions as counter agents both of fever and gastral irritations. As the cases glided towards the low, sinking states of fever, general stimuli, cordials, and tonics were resorted to.

In the local treatment every variety of application which was indicated by analogy, which was spoken of in systematic works, or which experience in the treatment of similar cases could suggest, was in turn employed. The carrot poultice came at last to be always preferred. The ulcer was thoroughly washed with warm soap ley, the tenacious mucus removed, its surface then covered with lint wet with whatever lotion, anodyne, or stimulant the case seemed to demand, and then the whole was enveloped with the carrot poultice agreeably warm.

"After all our experience with a variety of local plans and

remedies, the only warrantable conclusion seemed to be, that the result was very little influenced by the peculiar properties of any of the agents employed; that none of them exercised any very certain or manifest control over the tendency of the disease to keep its place, or enlarge its bounds. Beyond the simple effect of fomentation, cleanliness, and fresh soft dressings duly repeated, and these I conceive of great importance; I was unable to realize that anything was gained by local remedies, whatever their qualities or character. The carrot poultice properly made, appeared always to soothe very manifestly the morbid sensibility of the parts about the sore, and by promoting the comfort of the patient, became a valuable aid of treatment, and indirectly at least, the auxiliary to convalescence.

"Of our constitutional treatment and its effects, perhaps testimony substantially the same, as in reference to the local, might justly be given. It was, I fear, nearly nugatory, and while I trust it was never positively injurious, am compelled to doubt also, whether it effected much actual good. There was, in truth, a perplexing absence of indications what to aim at, in the midst of the most lamentable proofs of serious general failing, and urgent necessity of assistance."

"From all I could discover, the contest came at last to be decided, more by the constitutional powers of indurance and reäction, than by the counteractive agency, or remediate effect of our medicinal means."

Although Dr Wright believed the disease to be neither of hospital origin nor of a contagious character, every care and precaution in the management of those affected by it was attended to, which would have been demanded by a contrary opinion. Sponges were altogether dispensed with, and the substances used for cleansing and dressing the ulcers were destroyed immediately. The chlorides of lime and soda were freely and constantly used, and, in short, the most scrupulous attention was paid to the preservation of general cleanliness and purity of air. In regard to the two chlorides just named, as disinfecting agents, or *antidotes of pestilence*, Dr Wright says his faith is not equal to their reputation. There is no reason to suppose that the atmosphere or terrestrial poisons producing epidemic or endemic disease, are any more appreciable by the senses than they are susceptible of chemical detection. If we are not mistaken, Dr Smyth, in an ingenious work on the etiology of epidemics, published some years since at New York, goes so far as to say, that the exciting agent of epidemic disease, whatever it may be, is not so likely to exist

in an atmosphere loaded and saturated with the fœtid and noisome effluvia resulting from animal and vegetable decomposition, as it is in opposite states of the air. However this may be, we think the hope is a forlorn one, that any chemical re-agents will ever be found to destroy or neutralize that subtile and mysterious *something*, which chemistry, with all its wonderful power, precision, and accuracy of analytical research has never yet been able to discover — of the nature and composition of which it has not even obtained a shadowy glimpse or hazarded a probable conjecture.

Hospital gangrene has, we believe, almost uniformly been considered contagious. This character does not seem to have attended it at Baltimore. Dr Wright considers this subject at some length, but we have room to give merely his opinion, which we do in his own words.

"From an impartial examination of everything connected with the development and progress of gangrene in our hospitals, I was unable to account for either satisfactorily, on the presumption of a purely local cause of origin or means of propagation; and distrusting or rejecting these, the alternative explanation was meteoratious influence. It was not to anything in the nature of a peculiar miasmatic cause I was disposed to refer the disease among us — nothing that I conceived to be epidemically infectious — but that there existed at the time some atmospheric state, or properties, from whose manner of influence on general health this affection might be one of the results in particular constitutions — or even in whole classes of persons existing under a common and like predisposition to be acted on."

The disease declined toward the spring both in frequency of occurrence and degree of danger. There were no cases after the middle of May. Dr Wright says, that frequent recurrence in thought to the symptory course and termination of the disease, fixed a conviction in his mind, that in his treatment he had been too sparing in the use of antiphlogistic means, especially purgatives. He came to the conclusion, that disguised as the cases of gangrene were, in the garb of debility, they would have been more wisely dealt with, on the plan of early, active, and persevering efforts to promote all the secretions, gastral, hepatic and intestinal. An opportunity soon occurred of testing the correctness of his opinions. After an absence from the institution of seven months, gangrene re-appeared in the hospital on the 16th of January, 1832. A more decided depleting treatment was opposed to it, and with much

better success. The patients were vomited freely by ipecacuanna in full doses, worked off with chamomile infusions. This was frequently followed by the warm bath, after which calomel was exhibited in liberal quantity. He then gave purgative salts with syrup of rhubarb, and these were repeated till numerous and free evacuations were procured. In cases where there was spontaneous diarrhœa, the same plan was followed. Every patient in whom there was action enough to justify the experiment, was bled, and in no instance had he reason to regret the practice; they all recovered more promptly and with less local lesion than the others. Among the local applications were lunar caustic and arsenic. The ulcers were washed well with a weak solution of potash, and dried; they were covered with dossils of lint wet with Fowler's solution, reduced one half. This dressing was renewed till the eschar was completely formed, and at this time a decided stop was put to the spread of the local disease. Under this treatment but one death occurred in the whole number of cases, which amounted to twelve.

Dr W. seems to infer that the diminished mortality of the disease, during its second visitation is attributable to the more active antiphlogistic measures which were opposed to it. This might have been, in part, the case; but the general character of the disease differed much from that of the preceding winter. Not only would it have been probably less fatal than the first under the same treatment, but it evidently called for more vigorous depleting remedies. We shall close our notice of this very excellent and valuable paper with Dr Wright's account of the prominent appearances and symptoms of the disease, as they showed themselves during the second visit of the affection.

"The three patients in whom gangrene appeared on the 16th of January, had all been affected in a similar manner in the course of the past night. They had each been attacked by chill and shiverings; violent in two of the cases, attended by feverishness, hot, dry skin, head-ache, pain of the back and limbs, parched state of the mouth, great thirst, some nausea, and total loss of appetite. Cotemporaneously with these feelings of general disorder, pain, and a sense of burning heat, was experienced in the seat of the sore, with aching and numbness in the whole of the affected limb. The pain of the sore, and parts about it, was described as severe, and unremitting, seeming rather to be constantly increasing. The face of the patients was flushed; coun-

tenance anxious, and in two of them especially, the look expressive of extreme suffering both in mind and body. These two cases betrayed the sallow complexion mingled with dull red flush, and evident bilious tinge of the white coat of the eyes. The tongue in two of the cases was coated with mucus, and brown fur, and the edges reddened; in the third case, the tongue presented a singular aspect, it was clean, rather dry, without furring of any kind, but faded throughout, to pale yellowish red, causing it to look nearly colorless, and as if partly translucent. The appearance of the gangrenous ulcers in each of the cases was as follows: the shape of the sore was changed, and from being longer than wide, in all the cases, had become completely circular, with thick, hard, and highly inflamed margins, giving the ulcer a deep cup-like form, and the interior of this crater or cavity was totally black. Here then we had the full characteristics of 'hospital gangrene,' as that disease is wont to appear, and is commonly described. These cases were all removed immediately from the surgical ward, and placed in distant apartments, unoccupied by other patients; yet by the 25th of January, or the space of one week from the occurrence of the disease to those first subjects, gangrene had supervened in eight other instances in the same hospital, and in one case in the hospital of the blacks. In all these additional cases, the manner of constitutional affection, and the local signs, were precisely as has been reported of the cases first discovered; the same sense of chills and rigors, feverish heat, head-ache, pain of the limbs, &c, and about the sore, the same marks of high inflammatory irritation, hard, elevated margin, increased size, circular development, and blackened cup-like cavity."

Art. VI. — Observations on the Use of the Steel Probe.

By Zadock Howe, of Billerica, Mass.

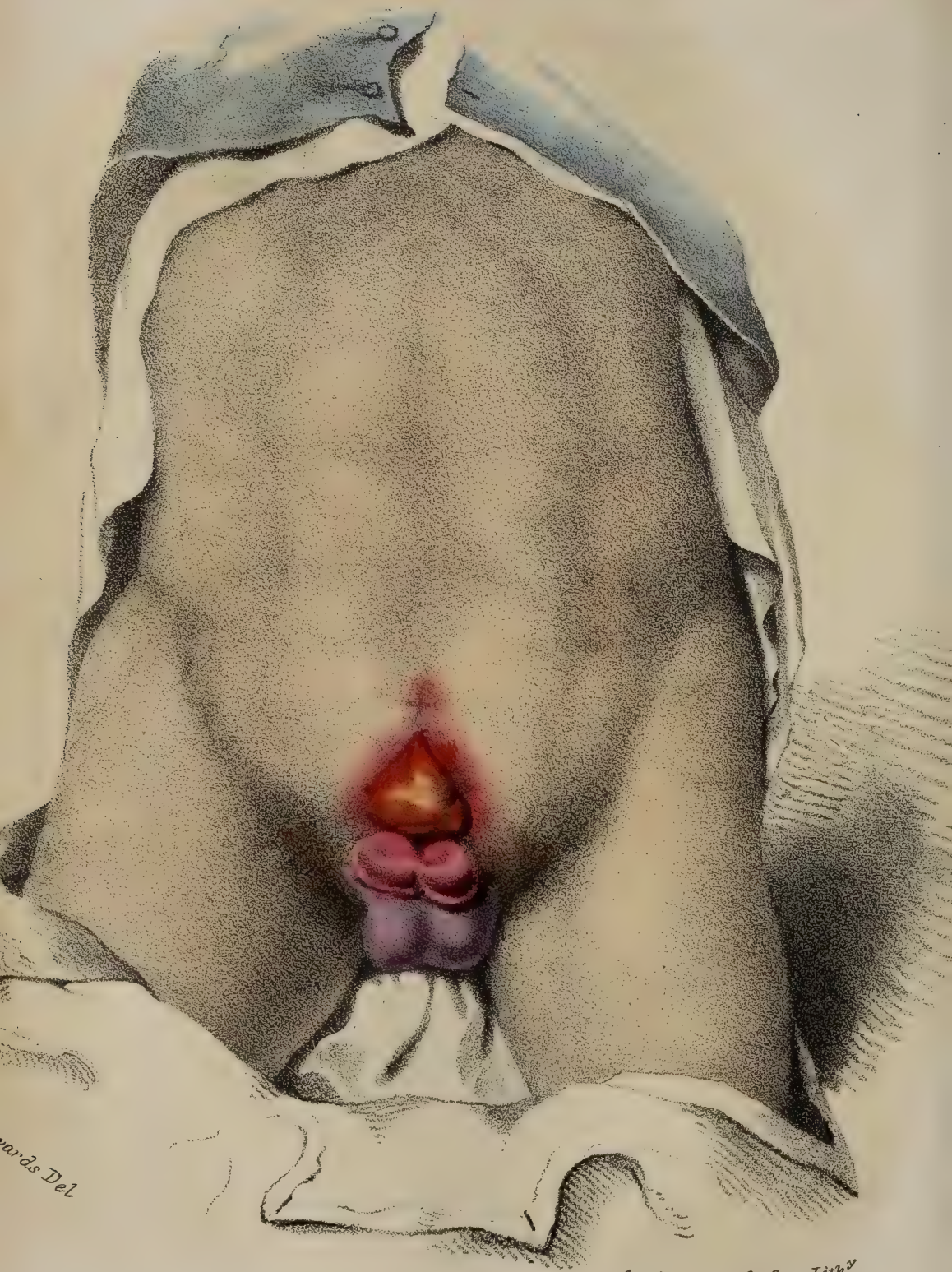
Every surgeon is occasionally called to extract parts of sewing needles, fish-hooks, and other small metallic substances, from the hands and feet of his patients; and however trifling these cases may appear, they assume an air of importance from the well known fact, that they sometimes lead to a train of formidable symptoms. Under such circumstances, there is generally a strong desire on the part of the patient that the foreign body may be removed as speedily as possible.

We will suppose a case of ordinary occurrence, and one, which we believe the surgeon is always sorry to see. A patient is presented, with a small part of a fine sewing needle lodged in the hand. The needle must be sought for ; but when a man searches for that which he does not expect to find, he will seldom do it with a very good grace. And so, after giving a *guarded prognosis*, he makes his incision at the suspected part, introduces the silver probe and feels for the needle. This verily, is like looking for a needle in the hay-mow : and as nothing but mere chance can insure success, he will probably fail of his object. Being unwilling to cut freely in tendinous parts, lest the remedy should prove worse than the disease, he consoles his patient with the hope of relief from suppuration — and thus the operation ends. After all, this is a kind of failure ; for neither party is quite satisfied with it.

A different mode of procedure in a similar case, will generally lead to a different result. We now introduce a small dissecting hook at the punctured part, and make two incisions through the skin, describing two sides of an equilateral triangle, with the hook attached to the centre. The point of skin is next raised and turned back ; then, with a hardened steel probe, made rough at the end, and held lightly between the thumb and fingers, the foreign body may almost always be distinctly felt. And for extracting it, the smallest kind of watchmaker's pliers are preferable to any forceps to be found among surgeons' instruments.

It will be safe to cut through the skin in any part ; and this will, in most cases, be sufficiently deep to answer the purpose, as the probe will easily enter the cellular membrane as far as will be necessary. If the extraneous body be minute, a silver probe is too soft to give that distinct and peculiar sensation to the fingers which is always satisfactory. For this purpose, the harder the probe, the better. If any one entertains doubts upon this point, let him introduce probes of lead, silver and steel upon detached portions of carious bone, and the difference in the sensations communicated to his fingers, will be sufficiently apparent.

Every surgeon must have observed that he feels a small piece of loose bone more distinctly with the end of the steel forceps than with a silver probe : the same remark will apply to searching for a stone in the bladder with a steel sound, or a silver catheter. We therefore claim nothing on the score of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originality, it is merely the application of a well known principle to a new purpose.

With regard to fish-hooks, many a luckless wight on a lowery day, instead of catching perch and bream, unfortunately catches himself with his own hook. This accident is attended with certain indescribable distortions of countenance, and requires the prompt attention of the surgeon. If the hook be found entire, the point may be raised and carried forward through the skin; then in consequence of the deep cut which forms the barb, and the high temper of the wire, the whole end is easily broken off, and the hook withdrawn.

This, surely, is a very simple process, and may be executed in a moment, but we sometimes find, from awkward attempts at extraction, the body of the hook removed, leaving the end forming the barb and point imbedded in the flesh. This furnishes a case well calculated to illustrate the utility of the steel probe.

Art. VII. — A Case of Malformation of a part of the Urinary Organs.

By George Hayward, M. D.

A man came to the Massachusetts General Hospital in June, 1832, in consequence of the above-named malformation. He is a native of the state of Maine, twentyone years of age, and enjoys good health, though he is not robust. On examination I found that immediately above the ordinary place of the symphisis pubis, there was an oval tumor, of six inches in circumference at the base, and projecting one inch and a quarter from the abdomen. This tumor had a fungus appearance, of a red color, with a small projection on one side of the size of a large pea, and on the whole bore a tolerably close resemblance to the mucous coat of the bladder.

The recti muscles were separated at this place, and the bowels, not being covered there, with the usual parietes of the abdomen, this red mucous surface was quite prominent and even painful to him unless restrained by pressure. The ureters terminated in this red surface, one on each side, one of them

directly under the small projection of which I have spoken, and the urine dribbled from them, usually in drops, about as fast as it was secreted. Sometimes it came out in a small jet, which was wholly involuntary.

The ossa pubes were not united at the usual place, but the junction was lower down, near the bottom of the scrotum. The urethra was wanting. The penis was short, being only two inches in length; broad, measuring five inches in circumference at its root, partly divided and united at the under surface only. The testes were perfect; the scrotum, in consequence of the separation of the pubes, was broader than usual; the umbilicus, though imperfect, was discoverable, lower down than its usual situation, at the upper part of this red surface.

It was evident on examination, that from the umbilicus to the root of the penis, the perites of the abdomen were wanting and their place was supplied by what resembled the posterior wall of the bladder. This red spot, which was constantly covered by a thick mucus, was no doubt the mucous coat of the bladder, as it was very sensible to the touch, but totally insensible to the urine, which was constantly poured out upon it.

The accompanying engraving gives a more perfect idea of the appearance of the parts than I can do in words.

He has no power of restraining the discharge of urine, but it flows much faster when the penis is carried up towards the ureters, than when it is suffered to hang down. The outlets of the ureters are large and easily discovered and I more than once introduced a probe into them to the distance of two or three inches. He has sexual desire, and when under the influence of it the penis becomes erect, and sometimes a discharge of seminal fluid takes place from the ureters.

One other case of this kind came under my observation about two years since, in a man who was also from the state of Maine. I had not however an opportunity of examining him very minutely.

In the 1st volume of the Edinburgh Medical and Surgical Journal, there is an account of a malformation of this kind in a female by Sir Astley Cooper, with the dissection of the parts after death. In the conclusion of this account, Sir A. says, "The explanation of these appearances is simple. The lusus consists in a deficiency of the skin and abdominal muscles anterior of the urinary bladder; in the want of the anterior half of the bladder; and in the projection of the posterior part

through the opening in the abdominal muscles, where it forms a tumor, upon the surface of which the ureters open."

In the same work there is also another case by Mr Coates; the subjects in both cases were females. Dr Duncan in the same volume, has a long paper on this malformation, with references to no less than forty cases in which it has occurred in males; it is much less frequent in females.

In the London Medical Gazette for April 7th, 1832, there is a clinical lecture by Mr Earle on a case of this kind in a female, who was admitted into St Bartholomew's Hospital. Mr E. states that "there are but seven or eight recorded cases of such malformation in the female," and "at least sixty related of its occurrence in the male."

August 2, 1832.

Art. VIII. — Massachusetts General Hospital.

Case of Trephining for pain in head and loss of speech caused by fracture of Cranium.—Dec. 7, 1830. Andrews Thompson, Æt. 35, seaman, Salem.

Four years since, while in perfect health, fell through the decks of a man of war and struck left parietal protuberance; was stunned by the blow, but recovered his senses in a few minutes. Resumed duty after one month. Has had constant pain in head ever since. Eighteen months ago began to have fits resembling epilepsy, and soon after power of articulation began to grow imperfect. Twelve months since fell down stairs in one of these fits and struck head in same spot where it was injured by first accident. Pressure upon this spot now causes pain, bone appears to be somewhat depressed. Since the last fall, pain has been more constant and severe, and fits rather more frequent, last one three months since. Now speech very slow and hesitating, as if at a loss to find words to express his ideas. Says he knows what he would say, but cannot express it. For three months has had numbness, loss of power of right arm and leg. Is able to walk, but gait is unsteady, partly from loss of power of right leg and partly from dizziness. Appetite poor — sleep disturbed by pain.

℞ Sol. Magnesiæ Sulphatis ℥ iv.*
Diet—no meat or butter.

11. Temporal artery of left side opened.

12. Nausea, head ache, pain at epigastrium, no dej.
℞ Pul. Rhei. gr. xv.
Potass, Super. Carb. gr. x. Misce.

13. Head ache remains severe, no appetite, no dej.
℞ Hydrar. Submuriatis. Pul. Jalapæ āā gr. vi. Misce.

14. Medicine operated twice.

15. Pain in head the same, confined to the left side; integuments over this part sore and hot.

16. Pain the same; apply to right temple six leeches.

17. Feels weak. Pulse 72; head the same—nausea yesterday.

18. Nausea — no dej.
℞ Sol. Magnesiæ Sulphatis, ℥ iii.

19. Medicine operated; feels easier. Cup back of neck.

20. Head easier.

22. Vomited yesterday. Diet liquid and not more than a gill at a time.

23. Some vomiting yesterday, although restrictions were observed — may have bread and rice — no dej.
℞ Infus. Sennæ Comp. ℥ iii.

24. Pain in the head greater than for some days. Pulse 72.
Tongue slightly furred.
Take ℥ iv. blood from back of neck by cupping.

25. Head relieved by cupping.

26. Pain very acute — nausea.
Vs. ad. ℥ xii. from left arm.

27. Head easier.

28. As usual — no dej.

*The formulæ for making Sol. Magnesiæ Sulphatis and Infus. Sennæ Comp. used in the Hospital, are the following.

Solutio. Magnesiæ Sulphatis.

℞ Magnesiæ Sulphatis. ℥ ii.
Sacchari Albi ℥ i.
Tincturæ Menth. Pip. ℨ i.
Aquæ ℥ viii Misce.

Infusum Sennæ Compositum.

℞ Fol: Sennæ.
Mannæ āā ℥ i.
Pul. Jalap.
Potass. Supertart.
Sem. Cari āā ℨ ii.
Aquæ Bullientis oi. Misce.

Infuse for twelve hours, then strain and to the strained liquor add Tincturæ Sennæ Comp. (Elixir salutis.) ℥ iv.

℞ Olei Ricini ʒ i.

29. Vomited several times last evening — head more painful — no dej.

℞ Hydrar. Submuriatis.
Pil Aloes et Colocynth. āā gr. vi. Misce.

30. Medicine operated. Depression of parietal bone two inches long, one inch broad. Wash head with the following —

℞ Tincturæ Opii, ʒ i.
Aquæ ʒ ii Misce.

31. Shave whole head.

Jan. 1, 1831. *Operation by Dr Warren.* — Two incisions about two inches in length, including a triangular piece of scalp, were made penetrating to the bone. This flap was then dissected up to expose the part of bone supposed to be depressed. On a careful examination of this part it was found that the bone at this point to the extent of about half a square inch was nearly removed by absorption. The bone being wanting the pericranium and dura mater were of course in contact. This circumstance was unexpected, as the bone was supposed to be depressed. The parts of the bone around this spot were considerably thickened, and as it was possible this thickening might encroach upon the cavity of the skull, it was determined to apply the trephine. A circular piece of bone was removed and some irregular points which projected into the part, where there was a loss of substance in the bone, removed by the bone forceps. The flap of scalp was then brought over and secured by a single ligature. The tempero occipital artery, which was divided, still bled very freely, and as compression gave much pain it was tied. The wound was dressed by a pledget and compress and the head covered with a cap.

2. No head ache; slept well. Pulse 96. Noises give great distress in head — no dej. — vomited once.

Venesectio ad ʒ xvi.

℞ Infus. Sennæ Comp. ʒ ii. et repetatur si opus.

Diet — gruel ʒ vi. three times a day. Lemonade, soda, and tamarind water for drink.

3. Slept well till 3 A. M. Kept awake after that by pain in wound — 4 dej. — pulse 100 small.

Remove all dressings except adhesive.

If pain continue,

Venesectio ad ʒ xii.

4. No pain — pulse 100 — tongue a little furred — says he feels well — was not bled — no dej.

℞ Sol. Magnes. Sulphatis ʒ iii.
If pain come on, V. S.

5. Pulse 84 — head easy when kept still and no noise. May have arrow-root drink,
Tinct. Acidi Sulph. diluti with water.

6. No pain all night — thinks right arm better as to feeling and motion — no vomiting since 2d — speech evidently more ready — may have roast apple.
℞ Sol. Magnesiæ Sulphatis ʒ iii.

7. No pain or nausea — may have bread — wound nearly healed — motion of brain very evident.

8. Some pain in head — sleep not so good in night — 3 dej. — pulse 86.
Dress wound mg. and ngt.

9. No pain in night — no nausea — slept better — may have rice and molasses.

10. Sat up nearly all day yesterday — setting up now — slept well — no pain — appetite good.

11. No dej.
℞ Infusi Rhei ʒ ii.

12. More bright — 2 dej.

13. No pain — arm and leg get stronger.

17. Took meat yesterday — no trouble from it.

21. Some headache — gill of broth or tea and ʒ iv. of bread every four hours.

23. Meat for dinner.

30. No trouble from food — bowels regular without medicine — walks much better.

Feb. 2. No dej.
℞ Sol. Magnes. Sulp. ʒ iii.

4. Some headache yesterday — now gone.

5. Electricity daily.

10. Rub arm with Liniment. Ammoniatum mg. and ngt.

15. Discharged well.

Case of Trephining for Epilepsy caused by fracture of Cranium. Feb. 6, 1832. Catherine Larkin, Æt. 23, domestic, Boston.

Thirteen years since a brick fell from top of a five story house and struck her on the head, about one inch from the middle of sagittal suture, on left parietal bone, fracturing the bone and depressing a portion of it. Now there is evident depression of a piece of bone, together with the scalp over it, of

about one half of an inch square. Has been subject to pain in head. About eighteen months ago had an epileptic fit and had them frequently since at irregular intervals. Had last one about a week since. Acute pain in head most of time.

7. ℞ Sol. Magnes. Sulp. ʒ iii.
Shave head, and apply over depressed portion of bone, Ceratum Saponis.

8. Operation deferred on account of Erysipelas in house.

21. Shave head anew.

22. *Operation by Dr Warren.* The patient was laid upon a table, resting on her right side. A crucial incision two inches in length, was made through the scalp and pericranium; these being dissected up the trephine was applied over and completely encircled the portion of bone which appeared to be depressed. The bone was then sawed through, and on being raised with the elevator, was found to be very much thickened; so much so, that when removed it left an evident indentation in the brain. The flaps were then brought together and secured by a suture. The wound was dressed with a pledget and compress, and the head covered with a bandage.

23. Doing well — very little pain — pulse 70 — tongue clean.

℞ Hydrar. Submuriatis.
Pul. Jalap. āā gr. x. Misce.
If pain severe,
Venesectio ad ʒ xvi.

24. Pulse 100 — nausea.

℞ Antimonii Tartarizati gr. viii.
Aquæ ʒ iv.
Take ʒ i. every 20 minutes till free vomiting.

26. 4 or 5 dej. from medicine — produced nausea — seems disposed to groan this morning — pulse 92.
Venesectio ad ʒ xvi.
If no dej. by 4 P. M. enema.
Some bloody discharge from wound — some erythema or redness about wound — let it be washed and dressed twice a day.

27. Pulse 112 — tongue coated — no distinct complaint.

℞ Antimonii Tartarizati gr. vi.
Aquæ ʒ ii. M.
Take ʒ i. every alternate hour if no vomiting from it.

Ceratum Cantharidum 4 by 8 to epigastrium. If no dej. enema P. M.

28. Pulse 80 — vomited once — some nausea afterwards — 2 dej. — wound foul and unhealthy — apply to it white bread and water poultice, covered with Unguentum Rosarum — renew it every 4 hours.

℞ Infus. Sennæ Comp. ʒ ii. every 4 hours.

March 1. Feels better — 2 dej. — not much pain in head — pulse 84 — wound looks clean — some appetite — take apple water — wash and dress wound with simple cerate 3 times a day.

2. Improving daily.

She adhered strictly to the liquid farinacious diet — when the bowels were not moved naturally, took a saline cathartic — wound continued improving and pain in head diminishing.

On the 23d of March she had a recurrence of epileptic fit which was not preceded by any obvious cause.

On the 1st of April she had another fit, making two since the operation. After this she had at times slight pain in head, but upon the whole, was much less annoyed by headache after than before the application of the trephine.

June 17. The wound being filled with granulations and entirely healed, and feeling well in every respect, was, at her own request, discharged well. Has had no fit since the 1st April and is presumed to be cured by removing the pressure made on the brain by the fractured and depressed bone.

Art. IX.—Boylston Medical Prize Questions.

We take pleasure in recording the success of another of our Southern brethren, in the honorable competition which the annual offer of the Boylston prize has awakened among the physicians throughout our country, and also in assuring our readers that they will probably have an opportunity of perusing the successful dissertation in our next number. The Medical Mecænas of New England in the establishment of this prize, has provided an encouragement to professional study and composition which will be recognised by those who shall mark the progress of medical improvement, as one of the first and most

permanent of its impulses. The premium indeed is not large; but, while it continues to be awarded by as enlightened and impartial a board as that to which it is now entrusted, the distinction which follows it cannot fail to stimulate and develope medical talent, wherever it is associated with ambition enough to give it any profitable degree of excitability.

One of the questions offered for 1834 — that relating to quarantine — although of constant and universal interest, as involving the mysterious subject of *contagion*, is nevertheless eminently apropos at the present time, when the burden and terrors of the pestilence which is sweeping over the country are aggravated immensely; when individuals are subjected to the most vexatious hardships, and when even the sacred obligations of humanity are in some instances violated, by a blind adherence to certain antiquated absurdities on this subject. We certainly intend to impute no improper motives to the constituted authorities who in many places have seen fit to impose these futile and terrifying restrictions on intercourse; but as we have been led to notice the subject, we cannot but express our disappointment and regret, which are both deep and sincere, that the experience of the other three quarters of the globe, has not convinced the intelligent inhabitants of America how utterly ineffectual, not to say irrational, are *cordons*, and *quarantine regulations*, when employed for the prevention of cholera. Every day's observation of its progress among ourselves is furnishing evidence to the same effect, and we trust that it will not be exhibited in vain to those who ought to notice it carefully, as the source of sound rules of action, in the exercise of the high and delicate powers conferred on them as guardians of the public health.

But we have been carried much farther into this matter than we intended while merely penning an introduction to the following notice from the Secretary of the Boylston Prize Committee — we are happy in contributing to give it publicity.

At the annual meeting of the Boylston Committee on Prize Questions, held on Wednesday the 1st day of August, 1832, a premium of Fifty Dollars, or a Gold Medal of that value was awarded to Robert W. Haxall, M. D., of Richmond, Virginia, for a Dissertation on the following question: "What is the cause of Fistula Lachrymalis; and what is the best mode of treating this disease?"

The following questions for 1833 are before the public, viz: 1st "The History of the Autumnal Diseases of New England."

2d. "What insects in the United States, and particularly in the Northern part, are capable of inflicting poisonous wounds? The

phenomena of such wounds, and the best mode of remedying their ill consequences ?"

Dissertations upon these subjects must be transmitted, post paid, to JOHN C. WARREN, M. D., Boston, on or before the first Wednesday of April, 1833.

The following questions are offered for the year 1834, viz :

1st. "What is the true nature of Polypus in the nostrils ; and in what manner may the disease be best treated ?"

2d. "Are the restrictions on the entrance of vessels into port, called Quarantine Laws, useful ? If so, in what cases should they be applied ?"

Dissertations on these subjects must be transmitted as above, on or before the first Wednesday of April, 1834.

The author of the successful Dissertations on either of the above subjects, will be entitled to Fifty Dollars, or a Gold Medal of that value, at his option.

Each dissertation must be accompanied with a sealed packet, on which shall be written some device or sentence, and within which shall be enclosed the author's name and place of residence. The same device or sentence is to be written on the dissertation to which the packet is attached.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, if called for within one year after they are received.

By an order adopted in the year 1826, the Secretary was directed to publish annually the following votes :

1st. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which the premiums may be adjudged.

2d. That in case of the publication of a successful dissertation, the author be considered as bound to print the above vote in connexion therewith.

GEO. HAYWARD, *Secretary.*

Boston, August 4, 1832.

COLLECTANEA.

THE operation of STAPHYLORAPHY was performed by Dr Warren, July 5th, on a young man about 18 years old.

The head being supported and the jaw held open by a wooden instrument one inch wide with a handle, the left side of the fissine was seized by a hook near the uvula, and about one line of the edge of the palate was removed from each side the fissure. The portions cut away were about two inches long. Next, the needle with a moveable eye, carrying a ligature of three threads was introduced through the right edge of the fissure, at the distance of half an inch from the upper angle of the wound, and at about a line from the edge of it. The point of the needle was drawn out by dressing forceps; and being re-armed with the other end of the ligature, was passed through the left edge of the wound in the same manner. Three other stitches were then made — each including about a line and a half of the edge of the fissure. Then the operator taking the two ends of the upper stitch, tied and secured them with his finger. The same was done with the three others ; and the ends of the ligatures were cut close to the fissure.

The patient neither spoke nor drank for three days, except taking a swallow of water to relieve a fit of coughing. On the fourth day he was ordered an enema of a pint of gruel twice in twentyfour hours. A perfect adhesion of the wound took place. The permanence of this adhesion cannot be determined till the ligatures separate.

The needle employed is undoubtedly the most convenient instrument for the purpose. It is described in the American Journal of the Medical Sciences.

In order to the success of the operation three things must be specially attended to : —

1. To cut away sufficient of the edge of the fissure.
2. To include a good portion of the remaining edge in the ligature, especially at the lower part.
3. To keep the patient as long as possible, say from three to five days, without food or drink.

July 10. The two lower ligatures ulcerated through one side, and a partial suppuration of the edges occurred. All above the third ligature remains firmly united.

July 19. The two superior ligatures not separating were removed by scissors. The adhesion between them was firm and inseparable. The patient has acquired about an inch and a half of palate, which will probably give him the power of distinct articulation.

Chemical Pathology of the Malignant Cholera.

A late number of the London Medical and Physical Journal contains an account of Dr O'Shaughnessy's Analyses of the Blood, Dejections, &c, of patients laboring under this disease. We shall take every liberty with the article which is necessary in presenting to our readers all the material particulars it contains in the most concise possible form. These investigations will be peculiarly welcome at the present time, as they furnish the basis (we had almost said, without intending any reflection on the gentlemen who employ it, that they suggest the only justification) of a method of treatment lately resorted to by some of our brethren in New York, which consists in the direct introduction of saline mixtures into the blood vessels. Whatever else may be said of this practice, it is certain that, in point of activity, it presents a remarkable contrast to the celebrated *camphor practice* which is destined to confer a certain species of immortality on Dr Channing of that city. In another particular also, there is a difference in the two processes, which is sufficiently remarkable, although as we judge, of very little practical importance — for while the substances which one supposed to be so efficacious in the injection are actually administered, the *all potent molecules of camphor*, if our chemistry do not mislead us, are precipitated, by the copious addition of water with which it is necessary to dilute them, so that the patient generally gets nothing more nor less than a spoonful of very weak spirit and water.

E. M.

" Dr O'Shaughnessy divides his report into three principal sections. In the first he gives a concise but careful sketch of the *exact state of our present knowledge* of the chemical composition of the *blood* in the *normal* or *healthy* condition. In the second section, an account is given of all the analytical inquiries yet instituted on the chemical pathology of the malignant cholera; noting the discrepancies between the several experimentalists, and stating the result of his own investigations. In the third division, he inquires into the extent to which these investigations entitle us to form pathological or therapeutical conclusions; and he '" endeavors to point out and explain the indications of treatment which they apparently afford.'

"Dr O'Shaughnessy commences his remarks on the normal or standard condition of the chemical composition of healthy blood, by observing that the reputed ingredients of blood drawn from the venous system in a state of health may be conveniently arranged and considered in three leading groups: first, those invariably present, in a proportion very little varying from a certain standard, and universally recognised by all chemists and pathologists; secondly, those usually present, but occasionally absent, and perpetually liable to alteration in their quantity; thirdly, those substances, the presence or absence of which in standard blood is asserted by some authorities, and denied, or not recognised, by others.

"'Under the first head may be included water, albumen, fibrine, coloring matter, extractive matter, and various saline substances; viz. the carbonate of soda, muriates, sulphates and phosphates of soda and potassa, carbonates of lime or magnesia; phosphates of these earths, and minute quantities of iron, in an unknown state of combination.

"'Under the second head may be specified a fatty compound, consisting of an oily and crystallizable matter; also urea, or the peculiar animal principle of urine.

"'The third embraces a considerable number of substances: namely, the free acetic acid, carbonic acid, cholesterine, free carbon, and traces of manganese, silica, and copper.'—p. 4.

"Attempts have recently been made to demonstrate the uses of the saline ingredients of the blood, and the merit of this investigation, Dr O'S. says, is almost exclusively attributable to Dr Stevens, of Santa Cruz, whose clinical statements and experiments have excited the attention of all the scientific physiologists and practitioners of Europe and America.

"'Dr Stevens's experiments may be thus briefly described: He found that dark blood extracted from a vein could not be made to assume the scarlet tint, by exposure to or admixture with the air, except saline matter was present, but that the addition of the minutest possible quantity of a salt, even destitute of oxygen, (such as the chloride of sodium,) immediately restored the red color. Proceeding on this indication, Dr Stevens used a combination of saline remedies in his treatment of the secondary period of yellow fever; a disease in which, in this stage, blackness of blood is a most prominent symptom. The results of this practice are described to have been of the most gratifying character.'—p. 6.

"From the various facts he adduces, Dr O'Shaughnessy considers it highly probable,

"'1. That the saline matters exercise an important, though certainly not defined or ascertained, control over the changes which take place in blood, during its passage from the venous to the arterial system.

"'2. That their absence or diminished proportion is connected in some unknown manner with the production of various diseased conditions.

"'3. That the coloring matter of the blood is not the sole ingredient affected by the respiratory process.'

"Dr O'S. then proceeds to the important subject of the comparative quantities of the constituent parts of the blood contained in a given portion of that fluid. To this inquiry he solicits particular attention, as it will be seen in his analysis of blood drawn from individuals laboring under cholera, that an absence or deficiency of some of the ingredients, and a remarkable deviation from the normal proportion in others, constitute, as far as his observations extend, the most remarkable features in the chemical phenomena of the disease."

"In the second section of his work, Dr O'S. enters upon the *Chemical Pathology of the Malignant Cholera*, and passes in review the analyses performed by Dr TURNBULL, CHRISTIE, Professor HERMANN, M. FOY, and Dr CLANNY. His own results are also stated, and to these only shall we direct the attention of our readers.

"'These results were based on the examination, first, of three excellent specimens of blood drawn in the malignant cholera; secondly, of one drawn in a case of ordinary, though violent, feculent and bilious diarrhœa; and, thirdly, of the dejected matters of eminently characteristic appearance, (a portion of which is already before the Board,) passed by one of the patients who died of malignant cholera, and whose blood was also examined.'

"His first experiments were made on the blood of a Mrs Barras, aged thirtynine, a lady of excellent habits and general good health till attacked with Cholera.

"'The crassamentum having been disturbed and broken up by some of the gentlemen present, the serum only was removed for analysis. The patient passed no urine from the commencement of the attack, until its fatal termination on the night of the 18th December.'

"Then follows the specific gravity of cholera and healthy serum, and a comparative Analysis of standard and Cholera serum.

"The tabular view thus afforded of the results in the first analysis, is interesting in several points of consideration. It shows, in the first place, the absence of a large proportion of water; secondly, the corresponding preponderance of albumen; thirdly, the presence of urea; fourth, the absence of the alkaline carbonate; fifth, a great deficiency of saline materials.'—p. 38.

"On the presence or absence of carbonic acid in the cholera blood, Dr O'S. made no experiment, as he cannot attribute to this agent any of the almost magic properties with which it is endowed by some ingenious speculators.

"'Wherever protracted asphyxia occurs, carbonic acid must be deficient in venous blood, no matter what theory of sanguification we embrace. That such a state of protracted asphyxia forms a primary feature in the *cold blue* cholera, every competent observer must admit, and all the symptoms of the disease unanimously proclaim.

"'The summary of my experiments may therefore be described as denoting a great but variable deficiency of water in the blood in four malignant cholera cases; a total absence of carbonate of soda in two; its occurrence in an almost infinitesimally small proportion in one; and a remarkable diminution of the other saline ingredients. Again, in the dejections passed by one of the patients whose blood was analysed, we find preponderance of alkali, and we recover the other saline matters deficient in the blood. Lastly, the microscopic structure of the blood, and its capability of aëration, are shown to be preserved.'—p. 40.

"In Dr O'S.'s opinion, many facts apparently indicate that the absence of water and saline matters from the blood are not *essentially* connected with the progress or the event of the malady. In some cases, for example, death takes place very rapidly, and without the occurrence of alvine evacuations.

"'The most obvious manner in which the loss of water could occasion death, is by the physical obstruction it would necessarily occasion in the passage of the blood through the capillary vessels, especially in the pulmonary circulation. The motion of the blood would, therefore, be confined to the great vessels, which would become distended to excess; gradual asphyxia should supervene, and death be occasioned with all the phenomena of impeded respiration and circulation. How accurately this description coincides with the events in cholera, it is unnecessary for me to point out. In short, this mode of death in this disease might at once be admitted, had we previously accurate ideas regarding the precise density of fluid which the capillary system will receive and permit the passage of, and had we found that the density of cholera blood exceeded this standard. I regret that my inquiries among some distinguished anatomical friends have failed to procure me any conclusive evidence on this subject.

"'I shall therefore content myself by expressing my conviction that this deficiency of water in the blood, is, at any rate, in many cases a powerful adjuvant in the production of the fatal event. This view of the case, as well as the general semeiology of cholera, are strongly illustrated by the following brief quotation from the chapter on Hyperœmia, in Andral's splendid work on Pathological Anatomy.'—p. 49.

"The next point to which Dr O'S. adverts is the probable influ-

ence of the absence, or diminution of quantity, of saline matter, in the progress of the malady. From all he has been able to learn on the subject, he infers that the diminution in quantity of saline matter in the blood is not immediately incompatible with life, and that the injury resulting is rather of a chronic character: that it takes hours or days for its production: he, consequently, would not attribute to the absence of the salts any important share in the inducement of sudden death in cholera, but he is inclined to believe such sudden diminution or absence to be closely connected with the fever stage of the malady; and this opinion is at the same time suggested and substantiated by Dr STEVENS's experiments on the state of the blood in the yellow fever of Santa Cruz.

"'The consideration however of the presumed effects of these causes, recognised in the alteration of the blood, leads to two important therapeutic conclusions, in the event of the universality of these effects being proved by subsequent inquiries.

"'These indications are,

"'1st. To restore the blood to its natural specific gravity.

"'2d. To restore its deficient saline* matters.

"'The first of these can only be effected by absorption, by imbibition, or by the injection of aqueous fluid into the veins. The same remarks, with sufficiently obvious modifications, apply to the second.

"'In the milder cases or preliminary symptoms, ere yet absorption is impeded, I should expect much benefit from the injection of copious enemata of warm water into the intestines. It should, however, be remembered, that in mild cases the necessity for such dilution is not immediately urgent,† inasmuch as the changes which give rise to the indication are not yet completed. The injections may, however, cut short the progress of the sanguineous alteration, which may otherwise supervene.

"'At the same time that this diluent injection is practised, a consideration of the state of the patient in each individual case will direct the competent practitioner as to the choice of the

* "In order to prevent misconception of my meaning, I must again emphatically repeat, that I do not consider this deficiency essential to cholera, but that it occurs as an accidental effect in a vast majority of cases; and that this effect must be obviated before we can accomplish a cure."

† "In the preliminary symptoms, strictly so called, astringents may prevent the inspissation of the blood by the alvine discharges. The best astringent I ever knew the effects of is the following, which saved many lives during the dreadful dysentery which prevailed in Edinburgh in 1829, while I was Dr Alison's clinical assistant. I have strong expectations that it would be also found of decided utility in the cholera diarrhœa: Take of Opium, twelve grains; Acetate of Lead, twentyfour grains; Conserve of Roses, a sufficient quantity. Make into a mass, and divide into twelve pills, one to be taken as occasion may require."

other remedies: such as stimulants, opiates, external warmth, &c, which may be calculated to re-excite the circulation and promote the required absorption; a function so intimately connected with the state of circulation, that the mobility or inaction of one is almost essentially connected with those properties in the other.*

"'The tepid water enemata may contain a certain proportion of the neutral salts. It will not be forgotten, however, that in the majority of cases these salts already pre-exist in the intestinal canal.

"'In the severe cases in which absorption is totally suspended, and when stimulants, however varied or energetic, fail to re-excite the circulation, I would not hesitate to inject some ounces of warm water into the veins. I would also, without apprehension, dissolve in that water the mild innocuous salts which nature herself is accustomed to combine with the human blood, and which in cholera are deficient. Let it be remembered, that if this experiment be not practised, death is inevitably close at hand, and that the proposal does not rest on idle or frivolous opinions. It should also be remembered that this mode of medication has, in many a desperate disease, been practised with success, and that by some of the most cautious and experienced physicians in the world.

"'I beg, however, that I may not be misunderstood, so as to be thought to recommend this proceeding indiscriminately. On the other hand, I would deem that practitioner little better than a homicide who would perform the operation without the sanction of a numerous consultation.

"'With respect to the treatment of the fever stage, I would expect much benefit from the frequently repeated use of the neutral salts by the mouth or by enemata, and dissolved in large quantities of tepid water. I should prefer the subjoined combination,† as it imitates to a certain extent the composition of the materials in which the blood is presumed to be deficient. Besides meeting the chemical indication, these remedies will also assist the cure by their aperient properties, &c.

"'While this practice is pursued, I would also obey every local indication, and use cold applications, leeches, &c, according to the symptoms of the case.'—p. 52.

* "Since this Report was drawn up, tepid-water enemata have been employed in Newcastle, with the best effects. (See Dr Gibson's Report, and Mr Caton's Letters, in the Cholera Gazette, No. 2.) In the cholera of 1688, Sydenham exclusively employed diluents, in order 'to dilute the spirituous parts of the blood;' and, he states, with the utmost success."

† "Take of Phosphate of Soda, ten grains; Muriate of Soda, ten grains; Carbonate of Soda, five grains; Sulphate of Soda, ten grains: dissolve in six ounces of water. The mixture to be repeated every second hour."

"In conclusion, Dr O'Shaughnessy points out the urgent necessity of making further investigations respecting the chemical pathology of cholera. He ingenuously confesses that he has but given the clue to the complete pursuit of the inquiry, and he believes that 'its extensive repetition would not only lead to an increased knowledge of the malady, but perhaps unravel many a mysterious problem in the functions of life and aberrations of disease.'"

[The following remarks by Mr Howison, of Edinburgh, are highly deserving attention and for the most part correspond with the directions of the most experienced American vaccinators.]

Vaccination.

1. The period of life most suitable for vaccination, appears to me to be from one month after birth to one year old. When performed during that period, the future vesicle goes through its progress in a more complete and perfect manner, and contains within its cellular structure a greater quantity of virus of the purest and most efficient quality, than it does when performed at any other period of life. From my experience I lay it down as an axiom, that the earlier in life vaccination is performed, the more complete, efficient, and beautiful (if an enthusiast be allowed the expression) in its appearance, is the future vaccine vesicle throughout its various stages; and that the later in life, the reverse of the position holds good. Indeed, I always feel uncomfortable in vaccinating individuals (as recruits and others, who are sent to the Royal Dispensary) at an advanced age. The future vesicle seldom gives satisfaction, and its security at an after period as a preventive against small-pox, is at least doubtful. Besides, the neglect of omitting vaccination to such a late period of life, always proves disgusting to the medical practitioner enthusiastic in his profession.

2. A healthy infant, plump, and well filled up in flesh — the infant brought up in pure air, cleanly kept, of healthy parents, — invariably produces a more beautiful and effective vesicle in all its stages, than the emaciated puny infant of large cities, nursed under circumstances the reverse of those above-mentioned.

3. In introducing the vaccine virus into the arm of the infant, I invariably make use of the the round-pointed vaccination lancet, contained in the cases of inoculating instruments sold in the cutler's shops, and never use the common bleeding lancet. The former scratches the cutis vera gently, steadily, and to a considerable extent, introducing a large quantity of virus into the wound, which makes the future vesicle of a long shape, and well filled with lymph, a circumstance of considerable importance,

where many infants are afterwards to be vaccinated from it. It also makes a practitioner careful and interested in the future success of his operation. The common sharp-pointed bleeding lancet, on the contrary, with the utmost care, and in the most experienced hands, gives unnecessary pain, pricks deeply, inserts only a small quantity of virus, produces effusion of blood, washing out the lymph rendering the formation of the future vesicle doubtful, producing one, small, of a rounded form, and containing too small a quantity for future inoculation.

4. Vaccination, which is performed by introducing the vaccine virus in its most recent state flowing from the vesicle of an infant at once into the arm of another, is always preferable to the inoculation performed from the glass, or from virus preserved in any other way, by crust, &c. And I feel convinced, that the perfection and security of the future vesicle will be in proportion to the freshness of the vaccine virus. I would recommend the practitioner, in all cases where it can be done, to send the infant to be vaccinated to the infant from whose arm the virus is to be taken, and to attend and perform the operation himself. Besides, there is a satisfaction to all concerned in seeing the latter infant, and in being assured of the certainty of the future vaccination.

5. Vaccination ought in every case to be performed in two places, and at the same time, in every infant. Some practitioners prefer to insert the virus into one place in each arm; others to insert it into two places in the same arm. When the latter method is followed, the inoculations ought to be so far from each other, that the inflamed ariolæ, at an after period surrounding each vesicle, may not run together. (If vaccination be performed in one place only in an infant, no virus ought at any after period to be taken from the visicle, otherwise too little will remain to be absorbed into the constitution, and its future efficacy as a preventive against small-pox may be uncertain. Besides, were it punctured, its future progress might be interrupted or totally destroyed.) See 10.

6. From long experience, I am inclined to think that temperature or weather, affects to a considerable extent, the perfection of the future vaccine vesicle. I have always observed that the vesicle is more complete, and more certain of going through its various stages, during the summer months, and particularly during warm seasons, when it is turgid with pellucid virus, than, during the winter, when cold and tempestuous, at which period the vesicle is small, imperfect, and flaccid.

7. It is unnecessary, generally speaking, in almost any instance, to administer purgatives, or any other medicines, to the infant during the progress, or after-treatment, of vaccination. In the Royal Dispensary, a few years ago, it used to be an inva-

riable rule to administer a powder of rhubarb and magnesia to every infant after vaccination. For many years past this has been entirely omitted.

8. The proper period for inoculating from the vaccine vesicle, when it has pursued its regular course, is undoubtedly the eighth day. At that time its cells are fully distended with transparent virus, and it is in its greatest state of perfection. If vaccination is performed from the vesicle upon the seventh day, the new vesicle will be small, contain a minute quantity of virus, and its future progress will be retarded, or totally destroyed. If the vesicle is allowed to advance in its progress until the ninth day, its virus will then be found to be opaque, the watery part being absorbed, and vaccination performed from it will probably fail.

9. A larger number than five children ought never to be vaccinated from the same vesicle, however large it may be, or however much virus may be contained in its cells, as the vaccination in a greater number of children will undoubtedly fail, perhaps from the virus becoming weaker in its nature. I am of opinion that in such a case the vesicles of the first child inoculated will be more perfect in every respect than those of the second, and so on, until the vaccination fail entirely.

10. In taking virus from the infant for carrying on after vaccinations, one only of the two visicles should be punctured or emptied of its contents; the other ought in every case to be allowed to remain uninjured, that its virus may be absorbed into the constitution, rendering the little patient for life afterwards proof against small-pox infection. If the virus be completely withdrawn from both vesicles, and its consequent absorption into the animal economy be prevented, I feel doubtful whether or not it will at an after period afford sufficient protection against small-pox contagion; at least when the entire virus of one vesicle is allowed to pass into the constitution as now recommended, the result must be far more satisfactory.

11. When virus is taken from the vesicle, and preserved upon a square of glass for future vaccination, it ought always to be deposited in a mass upon the centre of one of the squares, and allowed to stand exposed to the air, until it becomes viscid, or almost dry, previous to covering it with the other plate. If the two plates be brought together, when the virus is still fluid, it will be dispersed over the surface of both plates, forced beyond their edges, and rendered unfit for future vaccination. The best and most convenient method for preserving vaccine virus for future inoculation, with which the medical world is as yet acquainted, is undoubtedly the stoppered phial, with its stopper possessing a considerable surface, ground opaque, and slightly curved, and of one such, every medical practitioner should be possessed.

12. If we take into consideration how often virus is made use of for vaccination, which was not that of cow-pox, in its proper condition, or never taken from the vaccine vesicle at all, and how afterwards, individuals are passed off as vaccinated, we are not to be surprised at the numerous cases brought forward of small pox occurring after vaccination.

13. If the progress and efficacy of the vaccine vesicle, as a security against small-pox at an after period, be impaired or destroyed by diminished temperature, or by the tempestuous weather which prevails during winter, and which I believe to be the case, as detailed in the succeeding pages, it is proper to avoid performing vaccination under these circumstances as much as possible, and to confine it to the summer season.

During the months of November, December, and January of the past winter, whilst the vaccination carried on at the Royal Dispensary was entirely performed by me, I have observed that the vesicles upon the arm of the children inoculated, with very few exceptions, have not gone through the same regular and complete course which they were accustomed to do during the summer months, and which I have always formerly seen them to do. They have been small in size, flaccid, their cellular structure imperfectly filled with virus, and in many instances (I may say always, if punctured upon the seventh day, when virus was uncommonly difficult to be procured, which compelled me to do so) they have died away entirely without giving satisfaction, or they have never come forward at all. Vaccination, also, performed from these vesicles, have either proved unsuccessful, or, as might naturally have been expected, have only produced others more imperfect and unsatisfactory than themselves. During the months above made mention of, I have been frequently obliged to borrow vaccine virus from other sources to keep agoing the inoculation of the establishment, in place of having a superabundant and profuse supply at all times to give to others, as was formerly the case; and from the numerous applications made to us for a supply of virus during the above-mentioned interval, by private individuals and by public institutions, both in town and country, I am entitled to conclude, that they must have been in a similar situation themselves.

It is but candid, however, to state, that during the tempestuous weather which prevails during the winter months, showering snow and rain, mothers will not bring out their children to a public institution for vaccination; consequently as inoculation is there performed on two days out of seven only at the Royal Dispensary, viz., Wednesdays and Saturdays, and as the virus is only in activity during the eighth day, upon such occasions the supply of active virus runs out. This seldom or never happens

at any other period of the year, and forms one of the causes injurious to vaccination during the winter season.

In consequence of what I have brought forward in the preceding pages, the following important questions force themselves upon my mind. What has been the cause or causes of the falling off in the progress of the cow-pox vesicle, or of vaccination during the winter months? *Has it been owing to the tempestuous weather, and diminished temperature, which prevail during the winter, particularly marked in the past season? Has it been owing to the prevalence and severity of the small-pox, at that period uncommonly fatal, raging round the institution,* mitigating or destroying the energy of the cow-pox virus? *Has it been owing to the degenerating of the vaccine virus, at present in our hands,* owing to its long confinement to the human subject, and must we again have recourse to the original supply, the udder of the cow? *Is there any other cause which can be assigned for it* of which I am ignorant, or have omitted to mention? *Or have these various circumstances acting together* so far destroyed it, or diminished its energy? Will vaccination, carried on and passed through in an imperfect and unsatisfactory manner, secure the infant, at all future periods, against the contagion of small-pox? And has this last been the principal and only cause (taking into consideration the many uneducated individuals, nurses, blacksmiths, &c, who perform vaccination, and the inefficient and uncertain state of the virus introduced into the human constitution, under the name of vaccine fluid, by such individuals) of the state to which vaccination has fallen at the present day?

I may be blamed, and perhaps justly, for making these remarks at the present moment, — for throwing out any idea that may have the slightest tendency to lessen the public opinion of the benefits arising from vaccination. My observations, however, are intended to be confined to the medical profession. My intention is to strengthen the benefits arising from vaccination, to do away with circumstances that may prove prejudicial to its efficacy; and I hope that my intention will not be misapprehended.

Reflections upon these queries I leave to the more advanced in life — to the more experienced, and more judicious individuals of our profession. My ideas are, — First, that it is proper again to recur to the original source, the udder of the cow. — Secondly, that vaccination conducted under proper management, confined to well educated medical individuals (capable of accurately knowing the vaccine virus in its most efficient condition, and making use of such only), and to such alone, and carried on at a favorable season of the year, will flourish and prosper. — Thirdly, that vaccination is, and always has been, under such circumstances, a security against small-pox, and a modifier, when had recourse to too late, of its virulent action.

The medical gentlemen employed in the National Vaccine Establishment of London may be surprised that I have not taken notice of the platina, bone, wooden, &c, points made use of by them in the preserving and transmitting of vaccine virus to a distance. I have never used them in inoculating (although of late they have been so kind as to supply our establishment with them) from the circumstance, that for these three months past I have been superseded in vaccinating by my colleague Dr Warden, who takes that duty with me every three months alternately. I object to their use, however, in vaccination, upon the same principle as already stated when speaking of the sharp-pointed bleeding lancet.*

From the above it will appear, that I perform the vaccination duty every three months, alternately, at the Royal Public Dispensary along with my colleague, Dr Warden, and that the observations above made, apply to the vaccine vesicles as they presented themselves to my view during the months of November, December, and January, in the intensity of winter, and at a period when much tempestuous and rainy weather prevailed. I have now resumed the same duty during the month of May, the first month of summer, during which the weather, although chilly in consequence of the prevalence of the north-east, north, and easterly winds, has been clear and dry ; and as the temperature increases, I feel happy to say the vaccine vesicles have gradually regained their plump appearance, and now give me perfect satisfaction, the virus contained in them all being abundant, transparent, and fulfilling every purpose required of it. Am I not, therefore, entitled to conclude that diminished temperature and tempestuous weather diminish the appearance and properties of the vaccine vesicle ; and that increased temperature and dry weather again return it to its perfect state ; in other words, that vaccination proceeds much better, and is more effectual as a preventive against small-pox when performed during summer, than during the winter months? I must also state that within these few weeks small-pox has almost ceased to exist in the neighborhood of our Dispensary, and consequently cannot exert its effect in diminishing the efficacy of the vaccine virus. During the month of April (it also becomes proper to mention), Dr Warden received a large supply of vaccine lymph from the London National Vaccine Establishment, and made use of it. Therefore the vaccination at present going on, may be said to have been propagated from a different source from what was in existence during the months of November, December, and January, to which my remarks apply.

* The opinions of both the late and present experienced directors of the London Institution are contained in the latter chapters of Dr Epps' Life of Walker. — Ed. L.

On the Symptoms of Cholera in New York; with some Remarks on the Management of the Disease.

Read before the Boston Society for Medical Improvement, July 23, 1832, by John Ware, M. D.

The object of this communication is to give some notice of the symptoms of Cholera, as they were presented to the writer during a short visit to the city of New York, since its prevalence there, and some suggestions with regard to the management of the disease.

A few days' opportunity only of observing so formidable a malady, may be thought hardly sufficient to justify an individual in offering anything concerning it to his medical brethren or to the public. But it is to be recollected, that in the case of a new disease, we are all obliged to approach it in a state of at least partial ignorance; he, therefore, who knows but little from actual experience, may be able to impart something. His labors are still more likely to be useful in preparing others for its attack, if it present a variety in its aspect, as it appears in different places; if for instance it differ in Canada and New York, from the description we have had given of it in Asia and in Europe.

This appeared to be the case. At least the impression made by the inspection of patients laboring under Cholera, was different from what the usual descriptions given of it had prepared me to expect. Not that there was any variation in the symptoms or course of the disease, which could for a moment throw any doubt on its identity; but there was a very considerable variation in the relative prominence of the phenomena.

So familiar have we become with accounts of Cholera, that, instead of describing the disease, as it presented itself in detail, it will be only necessary to refer to those symptoms concerning which some particular remark occurs. The most universal of the symptoms, were the deadly coldness of the whole surface of the body, and the soaked, sodden, and shrivelled appearance of the hands and feet. Generally, also, there was a bluish or livid tinge of the skin of these parts, particularly of the extremities of the fingers beneath the nails. The hand in some instances resembled that of a person who had been working in a black dye. The blue or dark color of the face and of the rest of the body was not very common; much less so, according to the information of those who had visited Montreal, than it had been there. Still, a few patients were seen so dark, as not to be readily distinguished, across the ward in which they laid, from mu-

lattoes. The cold tongue, which has been described as so strikingly characteristic in some places, was noticed in but a small proportion of cases. It had generally a slight white fur. The pulse, though commonly very small and obscure, was not so frequently extinct at an early period of the stage of collapse as was expected ; and in some cases it was found quite distinct and of good volume, at not a very long period before death.

The vomiting and purging were less violent and frequent than had been expected. It was rare to witness more than one or two patients suffering from either, during a visit to a hospital containing twenty or thirty. They seemed to take place chiefly in the earliest period of the case, and in some never existed in any violent degree. One patient was seen at 11, A. M. whose bowels, according to his report, had been in a regular state the day before, and who had only had, in the course of the morning three or four discharges in the privy. He had not vomited at all ; yet he had scarcely any pulse — his skin and tongue were cold, and his hands and feet were affected by cramps. He had regarded himself as being well on rising in the morning.

Nearly all the subjects of the disease complained of cramps, or said that they had been afflicted by them when first seized. Still, very few were seen laboring under them so severely as to occasion any marked external demonstration of suffering. In nothing, indeed, did the cholera of New York differ more from the most common descriptions, than in the absence of any *indications* of great distress. It is true that a few seemed in much agony when vomiting, or undergoing spasm ; others complained bitterly of thirst and oppression, and burning at the stomach ; but in general there was little complaint, and little disposition to notice external objects at all. The aspect of the patients was almost that of indifference, and unconcern as to the event in themselves and in others. They seemed like persons totally absorbed in their own sensations, although in sensations which were not of a very acute or distressing character. They appeared often as if in a benumbed or stupefied state ; yet were without difficulty roused, and were at once perfectly sensible. Neither was there the sulkiness or irritability which has been said to appertain to patients with cholera. They answered questions readily and pleasantly. Though surrounded by medical men, and undergoing frequent examinations, I saw no instance of the manifestation of ill humor. Often, as soon as a physician approached the bedside, the tongue would be protruded and the arm stretched out.

In some cases the peculiar hollowness of the countenance, and the shrinking of the body and limbs, were strongly marked ; and in these, the aspect of the dying person was almost terrific. But these appearances were frequently wanting even in bad cases,

and I am not aware that the countenance could have been always distinguished with certainty from that which is exhibited in many other severe and exhausting diseases. Neither did the voice vary essentially from that of patients with such diseases. The shrieks and cries of pain, which accompanied the vomiting and spasm, were perhaps a little more characteristic.

The respiration was not always accelerated; but generally at least was performed without much action of the diaphragm, and was consequently attended by considerable heaving of the chest, and some labor. The chest seemed also as if imperfectly distended. In the act of death, this mode of respiration was continued; it simply became less and less full, till it ceased altogether. Only one individual was noticed, in whom death took place with a kind of breathing like that so commonly witnessed; viz. that accompanied by the rattling of mucus in the throat.

The excretion of urine was almost universally wanting during life; and but little was found in the bodies of those who were examined, except, as was observed by a gentleman who had made many dissections, where the vomiting and purging had ceased for a long time before death.

From the dissections which were witnessed, and from the accounts of gentlemen* who had made a large number, it was inferred that the heart and large vessels did not generally contain any large quantity of blood. The heart was found sometimes empty, and sometimes all its cavities were moderately filled with blood. The arteries always contained black blood. On comparing blood found in the descending aorta with that contained in the corresponding part of the vena cava, that in the aorta resembled common venous blood, whilst that in the vein was still darker, thick and imperfectly coagulated, being nearly of the consistence and color of tar. In the cranium, there was an effusion of serum into the ventricles and at the base of the brain. The blood-vessels were quite full, but not unusually so. No morbid appearance was observed in the spinal nerve. The lungs were considerably congested. The stomach and small intestines exhibited a slight reddish tinge when held up to the light, but showed no signs of inflammation. The large intestines had a whiter or bleached appearance. There was no unusual dryness of the peritoneum. The whole canal was filled with the peculiar liquid matter which constitutes the evacuations in this disease. This was generally in large quantities, of a dirty grayish white color, though in one case tinged with green, and of a flocculent appearance; sometimes quite thin, sometimes as thick as thin hasty-pudding. It resembled gruel which has not been sufficiently boiled, or coagulated milk, the curd of which has been very finely

* Dr Morell, of the Bellevue Hospital, informed us, that of the first twenty fatal cases all were examined after death.

broken up. Similar evacuations are occasionally witnessed in severe cases of common bowel complaints. Not a particle of fecal matter, or matter colored by bile, was noticed in any case, unless indeed the green color just mentioned was occasioned by the presence of bile. The gall bladder always contained bile, and its duct was pervious.

It is a matter of some interest and importance to determine whether we have any reason for believing, as some have done, that the spasmodic or malignant cholera is merely a more intense form of common cholera morbus, and is produced by an accumulation and concentration of the ordinary causes of the latter disease. That they have many symptoms in common, is not to be denied. It is quite certain that the common exciting causes of cholera morbus, such as irregularity and excess in eating or drinking, great fatigue and exposure, may also operate as exciting causes of spasmodic cholera. But, on the other hand, the course which the complaint takes, and the character of the symptoms in which it terminates, render it probable that there is, previous to these exciting causes, some peculiar predisposition of an unknown nature existing in the constitutions of the whole population where it prevails. Our common cholera, in some cases, reduces a patient to a state of great and irrecoverable exhaustion. It is accompanied by severe cramp, cold extremities, weak and fluttering pulse, ending in death. Yet, in a parallel state of exhaustion, is the aspect of the subject the same? Do the peculiarities of complexion, the state of the extremities, and the character of the evacuations, correspond? In common cholera, also, the exhaustion seems to be commensurate with, and to be produced by, the vomiting, purging and spasms; in the spasmodic, on the contrary, there is no such correspondence. The most rapidly fatal cases are not always those in which the vomiting, purging and spasms have been the most violent. Some individuals fall into the state of collapse almost at once, after but a short continuance of the symptoms which usually precede it.

It is desirable also to determine whether it be possible, in the earlier stage of spasmodic cholera, to distinguish it with certainty from an attack of the ordinary disease; to determine, for instance, in a place where cholera was not prevailing, that a case attended by vomiting, purging and spasms, was or was not the commencement of the epidemic. I fear the practitioner must wait for the symptoms attending the stage of collapse, before he can feel authorized to pronounce with certainty. In forming our judgment in such a case, we are to be chiefly governed by the state of the skin and pulse, and by the character of the evacuations. When the skin continues full of red blood, after considerable vomiting and purging; when the pulse remains full and of tolerable vol-

ume, and the extremities warm; when also the evacuations have a fecal or bilious appearance, one could hardly be mistaken in regarding the case as one of common cholera. Where, on the contrary, the pulse becomes quickly small and weak, with a dirty, dingy and bloodless skin, cool extremities and dejections of a light flocculent character, one would readily suspect spasmodic cholera; yet we surely see many such cases which the event, in ordinary seasons, proves to be nothing more than the common disease. Still, in such a case, if the malignant disease were either prevailing or expected, a physician could give no other than a doubtful opinion as to its character.

It did not appear, from such observation as was made of the effect of remedies, that any material variation was produced in the rate of mortality in cholera by the measures employed. This indeed seemed to be the general impression of those engaged in the management of the disease. And, it may be asked, has not this been the result, wherever it has prevailed, so far as we can judge from the reports of cases and deaths which we find in various publications? We have had, it is true, many flattering recommendations of peculiar plans of treatment, and general statements of their efficacy; but does not the general uniformity of the returns of dead and convalescent, in different places, satisfactorily show, that the good effects of remedies have chiefly existed in the imaginations of those who have employed them? The probability is, that this epidemic, like all others, varies in severity in different places. This accounts for the apparently greater success of that method of treatment which happens to have been employed where the disease has been mild. So, too, when it first makes its appearance in a new spot, it seizes on the worst constitutions, and on persons most strongly predisposed; and hence its great and appalling mortality. After a while it attacks individuals of better constitutions, and who are less strongly predisposed; these make a more determined resistance to the disease, and recover perhaps in a greater proportion. Hence, towards the close of the epidemic, the cases seem to be more tractable, and to be more under the influence of remedies.

How can we, except by means of some such explanation as this, account for the apparent success which has attended modes of management the most opposite in their character, unless we believe the statements which are made to be wholly without real foundation, and to have had their origin in the want of accurate observation, the self-deception, or the wilful mistatement, of their authors? Many physicians are loose observers, many are loose reporters, and some are both. I know not in what other manner we can account for the assertion of Broussais, that he loses but one patient out of thirty, while all his medical brethren

are losing half, or very near it. One might expect, if his statement were actually true, that public opinion would soon force the whole faculty to the adoption of a method of management so successful; and that a Paris mob might imagine the physicians of all the hospitals, except that of the Val de Grace, engaged in the combination to poison the people — since in the latter the patients all came out alive, and in the former all dead.

It is unquestionably a humiliating confession to the medical art, that fifteen years' experience has not taught us any mode of arresting the destroying progress of this disease. Yet, if it be true, it is better that we should know and acknowledge it; since then, instead of being distracted by the claims of opposite and contradictory statements, we shall direct our attention to the devising of new methods of treatment, or at least to means of prevention. The plague, which was once the scourge of Europe, is no more within the control of medicine, than it was centuries ago; but it has been banished from countries which it once visited, by preventive measures. The same is true of yellow fever, and the same may be found true of cholera.

According to this view of the subject, the treatment of cholera cannot yet be reduced to any fixed rules, but must be, in the main, tentative or experimental. It is not the intention of the writer, in speaking of means of treatment, to offer any opinion as to their probable efficacy, but merely to direct the attention to such as appear worthy of a *very thorough* trial; for it is obvious that only the *very thorough* trial of a remedy gives it any fair chance of success in a disease like this.

We may also remark, that the rapid course taken by this disease does not allow us to place dependence on remedies which require time to produce their effect. Our whole range is confined to a very few hours. Except, therefore, in the premonitory stage, we must confine ourselves to means which operate almost immediately.

We should also bear it in mind, in treating cholera, that, in all cases of violent action or of extreme want of action, the susceptibility of organs to the influence of remedies is either very much exalted, or very much diminished; generally the latter. Thus in fainting from excessive hemorrhage, great quantities of stimulus are required to produce an effect, and they must be frequently repeated in order to keep up the effect. Large doses of laudanum are also borne without the production of its usual operation. The same is true of any violent pain, and of excessive secretions. The power of the medicine given is neutralized by the disease. Thus a man with diabetes will bear twenty or thirty grains of opium in a day; and one with severe colic, two or three hundred drops of laudanum in a few hours.

It should also be premised, that the remarks made with regard to treatment refer to the confirmed state of the disease, that, viz. in which its peculiar character is fully developed. There is a premonitory or preparatory stage, in which the state of the system and the symptoms of disease are different, and require different management. It is not, however, in this stage that patients are generally seen in hospitals, nor usually in private practice; but it is in this stage that many physicians are so sanguine with regard to the effects of remedies.

Whatever be the variety of internal means recommended by different practitioners, they almost uniformly agree in the propriety of external warmth and stimulus; and in all diseases attended by coldness and want of action in the surface and extremities, the restoration of warmth and circulation is one of the first objects which suggests itself. In cholera, this is very strongly called for, since not only are the external parts cold and inactive, but, as some assert, the internal also. More proof, however, is required of the coldness of the internal organs than has yet been given; there are circumstances which render it doubtful, and it is a point which should be carefully investigated. Still, no doubt can exist of the coldness of a considerable part of the mass of the body.

Now it is very true, that this coldness is one of the consequences of the morbid condition on which the disease depends, and not the morbid condition itself, and that removing this effect will not prove a remedy for its cause. Yet it is also true, that many of the secondary effects produced by disease, are an obstacle to the removal of the disease, and obstruct the salutary efforts of nature or the influence of remedies. We often assist nature, and art also, in the struggle with the primary cause of disease, if we can artificially remove or suspend these secondary effects. Thus we assist the cure of dyspepsia by neutralizing the acid generated in the stomach as a consequence of this disease. So, too, where the system is sinking from a poison which operates by a suspension of that influence of the brain, which is necessary to respiration, if artificial respiration be kept up for a sufficient time, the effect of the poison ceases, and life is preserved. Something like this may be true with regard to the power of maintaining the animal heat in cholera. The reduction of the temperature of a large portion of the body and circulating fluids, for several hours, would alone be sufficient to cause death, were the system otherwise capable of struggling with and overcoming that internal state in which the disease consists. If a man, with the ordinary power of maintaining animal heat, were exposed to a degree of cold which should reduce his temperature to 75 degrees, this reduction alone would soon de-

stroy life. This often happens in cases of shipwreck and exposure at sea, where persons are chilled to death by immersion for a long time in water at a low temperature. The patient with cholera is placed in circumstances somewhat similar. His power of resisting cold being lost, he is cooled down by an ordinary atmosphere as much as a healthy man by a low temperature of the ocean.

A resemblance has been supposed to exist between the patient with cholera and an individual frozen by exposure, and it has been recommended to employ in the former the same treatment as in the latter case. But the resemblance is not so close as that which has been already suggested. In persons frost-bitten, the external parts are actually frozen; or at any rate reduced to a much lower temperature than those of cholera patients, while the internal parts retain their powers of resistance. This at least is true of recoverable cases. Although the temperature to which the surface is reduced is much lower, yet the whole body has not been equally cooled, and the heat providing powers not equally exhausted. No one would think of dashing cold water, or rubbing melting snow, over the body of a man chilled by immersion in cold water, to restore his animal heat; neither is it probable that this measure would be attended by any beneficial result in cholera.

We may regard it, then, as an essential part of the treatment of cholera, whatever means we may otherwise employ, that warmth of the body should be restored by external heat, and its activity promoted by external stimulants. It is by no means a matter of small importance by what agents we effect this. Let us recollect what we are to accomplish, viz. to warm through a solid mass of flesh. In order to impart heat, we must in the first place surround the body with bad conductors, which will retain the heat which is communicated to it, viz. with blankets, rugs or comforters. We must, in the next place, apply, within these, substances, which contain a good deal of heat, and which will give it out readily to the body; such as bottles of hot water, hot bricks, billets of wood, bags of sand, &c, &c. We may see at once how insufficient air baths must be, as indeed they have been found. Air is a slow conductor, and contains but little heat. How long would it take to raise the temperature of a dead body twenty degrees in an air bath? I suspect many hours. Hot air may warm the skin readily; but in cholera we must go deeper than this — we cannot rely on the heat-making power of the system to aid us in our endeavors — we must use means which shall extend as far as the coldness extends. Neither can we expect any amount of external covering alone to raise the temperature of the body. Blankets assist in the accumulation of heat, when the body is

capable of generating it; but they in no degree tend to warm it, when it has not this power. They could never warm a drowned man who had ceased to breathe.

The consideration that the heat-producing power is suspended in the cholera patient, should lead us to be cautious in relaxing the application of external warmth. It is not sufficient that the patient feels warm; the means should be persevered in, till a decided reaction has taken place, indicated by the state of the pulse, countenance and respiration, and should even then be cautiously relaxed. Neither should these measures be delayed till the patient is actually cold, when the stage of collapse is coming on. The loss of heat should, as much as possible, be prevented, by a great abundance at least of external covering, if not the application of absolute heat.

At the same time that the external warmth is thus provided for, it is important that the means used should not in some measure defeat their own object, by depriving the patient of fresh and cool air. Any imperfection of respiration, essentially impedes the keeping up of the animal temperature; and both foul air and warm air are productive of such imperfection. We should be cautious, therefore, that the rooms of cholera patients be not unduly heated, and that an abundance of fresh air should always have access to them.

External stimulation seems indicated, as next in importance to external warmth. This might be effected in various ways; but none seems more speedy and certain in its operation, than the poultice, or plaster of flour of mustard and vinegar. How extensively it might be proper to apply this, experience only can teach us. Few, even of cholera patients, are for any long time insensible to its effects.

A powerful, and, it is believed, a new method of exciting reaction by external application, has been adopted by Drs Lee and Roe, at one of the New York Hospitals, and, as has been stated, with remarkable success. It consists in the friction of the whole surface of the body, when in the state of collapse, with an ointment, composed of mercurial ointment, camphor and capsicum. Very little else is done, and nothing but a small quantity of drink, or of ice, given internally. We shall no doubt derive ere long, a full account of the particulars of this mode of practice, and of the success which has attended it, from these enterprising physicians themselves; and it would be premature to give, at the present time, anything more than this general statement. It is certainly, however, one of the measures which deserve a thorough trial from those engaged in the treatment of cholera.

But little can be said of internal remedies. The general im-

pression seems to be, both at New York and in Canada, that in the confirmed disease, nothing has as yet produced any very decidedly favorable effect, although all methods of practice have been tried; the calomel practice, the bleeding practice, the ultra-stimulating practice of spotted fever, the moderately stimulating practice, the camphor practice, and the ice practice. Still, we are hardly ready to give up in despair, and may inquire, whether it may not still be worth while to go over the ground again with some of these measures, unless we should be so happy as to escape a visit from this disease. The measures to which it might be desirable to give this trial, would be,—

1. The highly stimulating practice of Drs Miner and North, by means of immense quantities of opium, brandy, capsicum and essential oils. So far as tried, this course has been said to be attended with unfavorable effects. Might it not bear a fairer chance of success, if combined with the injection of a saline solution into the veins? It may be, that these stimuli fail of their accustomed effect, from the want of a sufficient amount of circulating fluid.

2. The mercurial practice, carried to the greatest possible extent, both internally and externally. Dr Chisholm administered immense quantities of mercury to his yellow fever patients; one patient having used over 5000 grains, and many have actually taken more than a thousand grains by the mouth. We might do the same in bad cases of cholera, at least without danger; and besides the administration of calomel by the mouth, and frictions, we might also make use of mercurial fumigations continued for a great length of time, a whole day for instance, which would not only act mercurially, but would assist in raising, or at least maintaining when raised, the animal heat.

3. The administration of ice internally, according to the method of Broussais. Though not placing unqualified reliance on the accounts given by this teacher of his practice, and believing him to be much wanting either in accuracy or in sincerity and good faith, the peculiar circumstances in which we are placed, with regard to the management of cholera, renders it our duty to employ all those means for which very decided success has been claimed.

4. Bleeding from the general circulation. It is remarkable that no remedy has been more strongly recommended than this, in works on cholera as it has elsewhere prevailed; and yet that no decided success has followed its employment in this country, so far as we have any evidence. Still we are led to believe, such is the authority on which it has been recommended, that there may be states of the disease in which it will be followed with advantage.

5. Injection of large quantities of warm water, or of a warm saline solution into the veins. So far as we have been informed, the immediate effect of this measure has been to restore the circulation and warmth of the patient; in fact, to rouse him from the state of collapse. Of its final success we know less. It is remarkable that, of all the cases mentioned in a late communication in an English Journal, and republished in the Boston Medical and Surgical Journal, we are not told of the result of a single case. It was employed in the case of a patient at the Bellevue Almshouse, at New York, by Drs Morell and Baker, and twenty four ounces of warm water were introduced into the veins. The immediate effect was highly promising, but relapse and death ultimately took place. We have been since informed that an instance of complete recovery has followed the saline injection, in the Crosby Street Hospital, under the care of Drs Rhinelander and Dekay. Measures which afford even a temporary revival should, in this disease, be seized on with eagerness. If therefore the injection into the veins proves to be as effectual in the promotion of a temporary reaction as has been asserted, it may answer a valuable purpose by prolonging life, and thus affording time for the operation of other remedies, even if it should not be sufficient for the preservation of the patient. Like external heat, therefore, its employment should be cautiously combined with that of all the other remedies in different cases; since we may, perhaps, arrive at that success from the judicious combination of means, which we seek in vain from perseverance in any single course.

Case of Calculus in the Female speedily removed by Weiss's Dilator.

By John Forster, Esq., Surg., Lambeth.

The infrequency of Calculous disorders in this country compared with their frequent occurrence in Great Britain is a matter of common observation, but never, that we know of, satisfactorily accounted for. Will any of our medical friends supply us with a sufficient reason? We cannot flatter ourselves universally that our immunity is owing to our drinking purer water and less Port, since there are some regions in which calcareous water supplies all the culinary demand, and there are individuals among us who can vie with the grand gourmands of any country in the vigor with which they tax their urinary organs to throw off the excrementitious fluids of their crapulous stomach. Nevertheless both the gluttonous and the temperate for the most part escape the torments of a stone in the bladder. Occasionally, however, the disease is noticed and the following case will be read with interest. E. M.

The comparative infrequency of calculus in the female, induces me to transmit for publication the following case, in which the removal of the stone was accomplished in about four hours by means of Mr Weiss's excellent dilator, of which a representation is given by him in The Lancet for March, 1828.

Mrs B., between forty and fifty years of age, after recovering from an attack of erysipelatous inflammation of the head and neck, complained of suffering considerable pain about the urinary and genital organs, increased very much of late, but experienced more or less for the last eighteen months. These were uneasiness and a jarring sensation in walking, particularly in descending stairs; with a degree of pressure on one side of the passage, and a sense of bearing down; a slight pain in making water, and occasional interruption to its free passage; she could not bear the motion of a carriage, without suffering a good deal, and felt as if nothing was the matter if she continued to sit still; but on assuming the horizontal posture from the erect one, or, *vice versa*, she always experienced pain: the urine had never been tinged with the least appearance of blood. Upon introducing the sound a calculus was detected. Being a person of strong mind, she was immediately informed of the nature of her case, and the plan to be adopted to relieve her, to which she readily assented; she was put upon low diet, a few active purgatives administered, and a day appointed for its removal.

A dilator was introduced into the meatus urinarius, and its arms gradually extended for about one hour and a half, so as to dilate the urethra to as great an extent as possible, without producing much inconvenience; when, finding it would occupy some time, the patient was left for nearly two hours; and then complaining of fatigue and uneasiness of posture for so long a period, it was removed, and a pair of polypus forceps introduced into the bladder; the calculus not being immediately grasped, the fore-finger of the left hand was passed into the bladder, and the situation of the stone ascertained; and on passing a pair of middle-sized stone forceps, a mulberry calculus was embraced, and required nearly twenty minutes' patience to allow the urethra still further to become dilated, previous to being able to extract it, without laceration of the urethra; the circumference of its major axis being three and a quarter inches, and its minor two and five eighths inches, and its weight 160 grains, in appearance like a peach-stone. Some slight pain of the parts and tenesmus came on about four hours after the removal of the stone, and continued until the bowels were freely acted upon by aperients; the patient continuing the horizontal posture during the time, it is believed the urine was capable of being retained after the space of twenty hours, and she recovered without any bad symptom.

On the most Efficacious mode of Applying Sinapisms.

(Archieves Générales de Médecine.)

The following observations by *MM. Trousseau and Blanc* will be found useful in settling the proper method of using mustard for sinapisms. They were induced to make some careful experiments on the subject in consequence of the discrepant statements made in works on materia medica. Some recommend that the flour of recently ground mustard should alone be used, others that the bran only of the flour should be taken. Some direct the flour to be made into pulp with warm water, others with vinegar, others with concentrated acetic acid, others with warm water or warm vinegar, indifferently. Some advise that the sinapism be left applied for hours, others for two or three hours, and others, again, for a single hour only. The authors have very carefully determined the respective advantages of these several several practices; and it appears from their experiments, that the several circumstances of difference are very far from being immaterial.

Their experiments were made chiefly with the black mustard commonly used for culinary purposes in Paris. They first found that the flour loses scarcely any of its activity by keeping. In their standard experiment, they remarked, that recently ground mustard, mixed up to a proper consistence with cold water, caused slight smarting in five minutes, and in ten minutes the heat and sense of burning which characterizes the full operation of the sinapism. They next remarked that flour five months old did not cause smarting within seven minutes, but brought on the full sense of burning in ten minutes, or as soon as the sample of fresh flour. They then found, that when the fresh flour was mixed up with the hot, instead of cold water, the smarting commenced in three minutes; but the full sense of burning was not developed in less than ten minutes; and, consequently, although hot water accelerates the commencement of its action, the effect is ultimately and in a very short time the same when cold water is used. The most remarkable results, however, were obtained from their experiments with acetic acid. When the sinapism was made with common vinegar, instead of water, its activity was not increased, as is commonly supposed to be the case; it was, on the contrary, much retarded and diminished. In fifteen minutes, there was extremely slight smarting, which increased so slowly, that in fifty minutes, it was not greater than was produced by the water sinapism in six minutes. The substitution of warm for cold vinegar did not increase its activity. Neither was any advantage gained by substituting for common vinegar concentrated acetic acid,

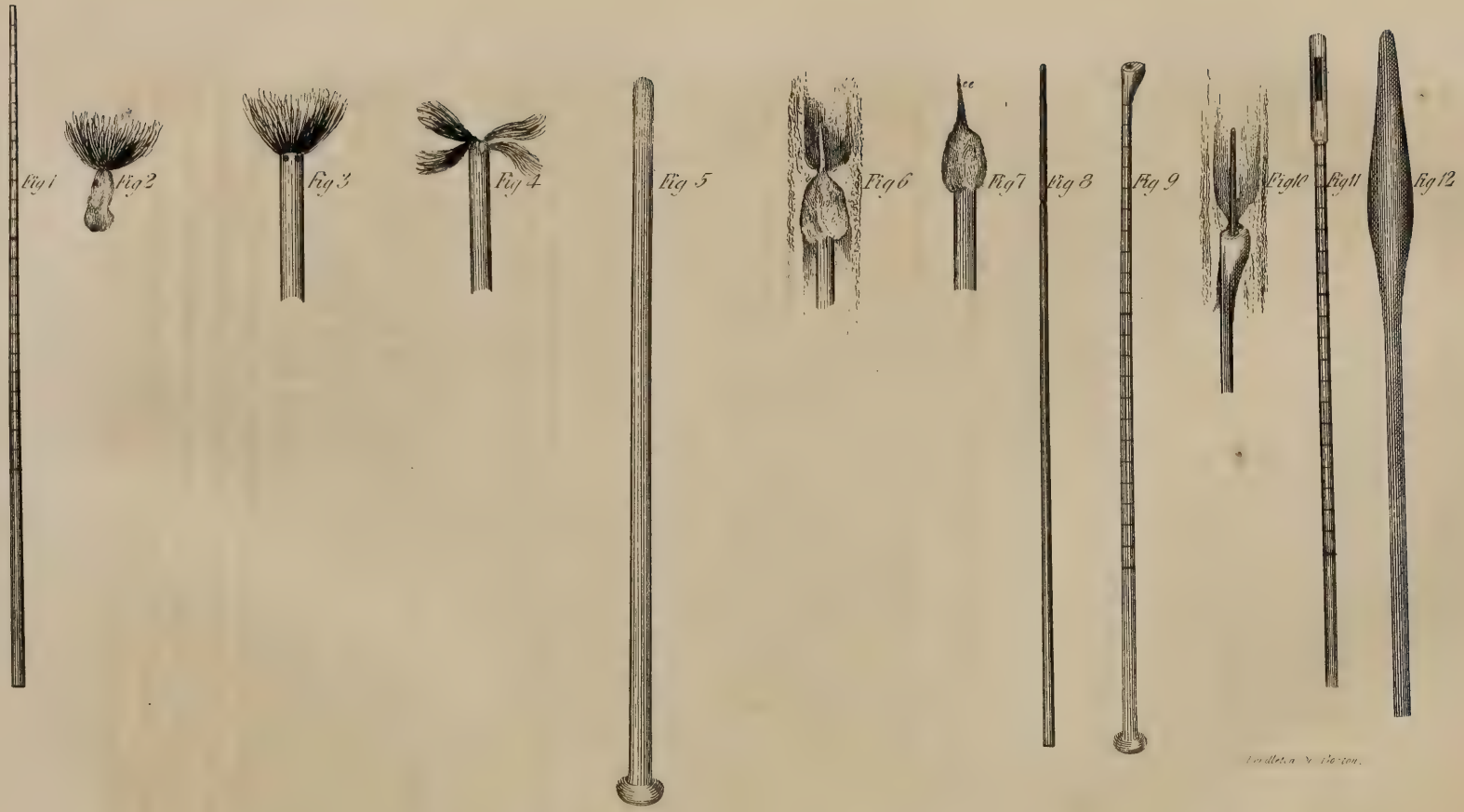
diluted with its volume of water; on the contrary, no effect whatever was then manifested in fortyfive minutes. Nay, concentrated acetic acid itself appears not more powerful then simple water. A sinapism made with it had no effect in six minutes; in seven minutes, there was slight smarting; and the full sense of burning was not developed till the twelfth minute. These are interesting facts, because they show that the mustard-flour and the acetic acid possess the property of mutually moderating the rubefacient or irritating properties of one another. Concentrated acetic acid itself seems, from the experiments of the authors, to be one of the most rapid, powerful, and convenient rubefacients that can be employed. When applied on a sponge, or mixed with sawdust, so as to form a mass like that of a sinapism, acute smarting pain was produced in a minute and a half; in a minute more, the pain was insupportable; in three minutes from its first application, the experimentalist was compelled to remove it; and notwithstanding the short interval which was thus allowed to pass before its removal, the corrosion produced left a mark three months afterwards. A singular fact, which they have not been able to explain, is, that the activity of a sinapism made with English mustard is not lessened, like that of the French mustard, by substituting vinegar for water.

The following is their account of the several consecutive effects of a sinapism made with water, and of the precautions which should be observed in using it. The first effect is pricking or smarting, which begins in five minutes; in ten minutes, this is converted into acute burning pain, such as is produced by hot iron held near the skin; next, a deeper-seated sensation is felt like that of constriction, or of a heavy weight pressing on the muscles; but after twenty or twentyfive minutes more, the original burning pain returns more violently than ever, and few, who are not insensible from some affection of the brain, can support sinapism much longer. After its removal, the impression of the cold air relieves the burning for a time; but this in a few minutes, returns acutely, is soon attended with an uniform, rosy efflorescence, and may continue more or less severely for twelve hours or several days. The authors maintain, that if a sinapism is properly made, and of good materials, it should very rarely remain applied longer than between fortyfive minutes and one hour; and that, if it is left for three or four hours, as some direct, its effects may sometimes prove extremely unpleasant. In cases of cerebral oppression during fever, they have known severe sloughing induced by the neglect of this precaution, the physician, having been misled by the patient not complaining of pain, and having allowed the sinapism to remain for several hours.

Inhalation of Chlorine in Phthisis.

Notwithstanding the bad success which has attended all the efforts which have been made for the last forty years to cure consumption by remedies directly applied to the local affections, new trials continue to be practised and new remedies are made the subject of experiment. At the present day iodine and chlorine occupy the most conspicuous stand as medicinal agents to act upon the respiratory organs through the medium of vapor. Dr Elliotson, the able physician at St Thomas's Hospital, London, stated in a clinical lecture, March, 1831, that he had been disappointed of relief in his trials of iodine, but that in a single instance the use of the chlorine had produced a mitigation of symptoms such as he never saw from the use of any medicine whatever. Contrary to what would be naturally supposed, the chlorine is much the least irritating of the two. A lady who could not bear the inhalation of iodine in the quantity of one drop of the saturated tincture to three quarters of a pint of water, was able to inhale in the same quantity of water, twenty drops of the saturated solution of chlorine, and the alleviation was so great that the cough nearly ceased and the expectoration reduced in a great degree. This was a case in private practice. Upon a man in the hospital laboring under phthisis and other complaints the effects were similar. The smallest quantity of iodine that could be employed produced great irritation, and his improvement under the chlorine inhalations was so great that he would hardly allow that anything was the matter with him, and averred that the chlorine had "given him a new inside."

The inhalation of these substances in a gaseous state is a difficult matter and requires complicated and expensive apparatus. But by causing the patient to inhale through impregnated water so that the air respired is charged with the vapor of the water which contains the medicine, the same effect is produced in a cheap and easy manner. All which is necessary is simply to adjust a bottle with a large mouth, through the cork of which are to pass two glass tubes. One of these tubes should descend to the bottom of the fluid to let down the air from the atmosphere. The other tube should not reach the surface of the water, and is the one to which the mouth is applied in breathing. The atmospheric air is thus made to pass through the medicated fluid before reaching the lungs. P.



FISTULA LACHRYMALIS.

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"Itaque ad experientiæ et scientæ istius cui inservio normam, mea omnia exigi et probari velim." — WILLIS.

ART. I. — BOYLSTON PRIZE DISSERTATION.

[The Secretary of the Boylston Committee on Prize Questions has been kind enough to place in our hands the following essay for publication. We are happy in being able to present to our readers an indigenous treatise so truly valuable as we deem this to be, on a disease which has occupied the pens of the ablest surgeons in Europe for a long period past. The author will understand that in annexing the vote at the conclusion of the Dissertation, we act in compliance with a standing order of the Committee, and signify only our approbation of the rule as a general law.] E.

A Dissertation on the Disease commonly called Fistula Lachrymalis. By ROBERT W. HAXALL, M. D. Richmond, Va.

"Que les efforts infructueux de nos prédécesseurs ne nous découragent point; écartons-nous des sentiers battus, sortons de l'ornière de la routine, envisageons le sujet sans d'autres faces, et peut-être verrons-nous luire une clarté nouvelle."

SCARCELY any surgical disease with which we are acquainted, seems to have been so little understood by the ancients, as that which forms the subject of the present essay. A want of that minute and practical anatomy which so preëminently distinguished surgeons of a more modern date, and of our own time, together with a total disregard of all post-mortem examinations, can furnish the only clue to their protracted ignorance of this disease. Hence, too, arose their many wild and suppositititious theories with regard to its pathology, and their no less

futile and unprofitable plans of treatment. Possessed, in almost all cases which presented themselves, of the unreal ideas of caries and callosity, they esteemed these supposed pathological conditions as indicative of those remediate agents, the use of which, instead of relieving, could only tend to aggravate.

It is not a little surprising that even after the existence of the lachrymal sac was known, the true seat of this affection (or at least one of them, for it will be shown that others exist,) should have remained in obscurity, — the caruncula lachrymalis being looked upon as the punctum saliens of all the mischief which followed. Fallopius himself, who first gave an accurate representation of the sac and nasal duct in the 16th century, seems to have fallen into the same mistake, and it is truly remarkable that a similar error, according to Heister's account, should have continued down to the commencement of the last century. Being acquainted with the true anatomy of the parts concerned in fistula lachrymalis, an erroneous notion of its pathology appears still to have existed, and for a long time patients were doomed to undergo the painful application of eroding escharotics and disorganizing cauteries. Demonstrative and pathological anatomy, however, within late years, has done much in clearing away the rubbish which encumbered medical opinions, and among the great mass of diseases, relative to the pathology of which we have become more enlightened it will be found that this has not been the last to benefit by the change.

Much contrariety of opinion has hitherto existed among modern writers, and I know not that the point is yet fully settled, as to what a fistula lachrymalis really is ; — some have given this name to various diseased conditions of the lachrymal organs, dividing them by way of distinction, into true or false, perfect or imperfect fistulæ; while others have confined the term to that state of things alone in which there exists a fistulous orifice, giving vent to the altered secretions of the part. As far as I have been able to make the examination, authors of the present time appear inclined to adopt the latter definition, because it gives a more accurate idea of the *true* nature of the affection, and because it must unquestionably tend to reconcile existing differences in regard to particular medicines and modes of operating. There is another reason, however, which induces me to adopt a similar view; it is sufficiently

evident that all those abnormal states of the lachrymal organs, which if not placed under some remediate influence would ultimately lead to fistula, may be and are often cured without producing this result.

This laxity of terms has no doubt been the cause of much misunderstanding among medical men, and so sensibly have I experienced it, that whenever I hear others speaking of cases under their care, the question invariably follows, for what stage of what is commonly called fistula lachrymalis have they been called upon to prescribe? Why then should we call a simple inflammation of the sac or nasal duct a fistula, when none in reality exists, and probably may not? With the same propriety might we say, that a person laboring under stricture of the urethra was affected with gonorrhœa, because the former was the consequence of the latter, or that one in whom there existed an adhesion of the pleuræ, was the victim still of acute pleurisy.

Causes.—Limiting the term fistula lachrymalis, as we have thus endeavored to do, to that condition of the organs in which a fistulous orifice is observable, it necessarily follows that the various antecedent diseases to which these organs are liable, must be considered, as *proximate* causes of fistula; — and whatever cause or causes are found to produce such diseases, are to be regarded as the *remote*. Adopting, then, this view of the subject, the question propounded by the committee can only be answered by giving a succinct account of the different affections to which the lachrymal organs may be subjected; and to be as distinct as possible, the following arrangement seems best suited to our purpose. We will consider,

1. The diseases of the puncta and their canals.
2. Dropsy of the lachrymal sac.
3. Acute inflammation of the lachrymal sac.
4. Chronic or strumous inflammation of the sac; and,
5. Obstructions of the nasal duct, either by a diseased condition of its lining membrane, or by the interposition of external substances.

1. *Diseases of the puncta and their ducts.*—Observation has sufficiently established the fact, that the healthy performance of the functions of the lachrymal sac and nasal duct, depend upon the regular absorption of the tears by the puncta; in default of this, the sac is found to take on a diseased action, arising no doubt from a want of the customary impression

made by the reception of the tears. Following in regular order, on the principle of continuous sympathy, the nasal duct soon becomes involved, and as the consequence of this, a disease arises which nosologists have termed mucocele or dropsy of the sac. As in this case, the distention of the sac is sometimesso great as to cause its rupture, producing in our restricted sense of the term a fistula, it seems necessary that some notice should be taken of this particular affection, and the means adapted to its cure. These will be mentioned in their appropriate place.

Various are the diseases to which the puncta and their ducts are liable, arising in a large majority of instances from inflammation, pure, or modified by constitutional differences. The causes of this inflammation are such as produce a similar condition in other parts and textures of the body ; such as cold, exposure to a damp and changeable atmosphere, wet feet, &c, —it is also found to exist as the sequence of some of the eruptive diseases, as measles, small-pox and scarlatina. As the inflammation progresses the eye becomes irritable, the tears fall over the cheek, the edges of the eye-lid in the neighborhood of the puncta are tumid, and the integuments somewhat puffy ; —pain manifests itself in a greater or less degree, and the general system sometimes though rarely, sympathises. The curative means to be used are, general bleedings in plethoric constitutions, the application of leeches, blisters behind the ears, laxatives, and after all active inflammation has subsided, gently astringent solutions.

A tumefaction and thickening of the lining membrane of the ducts are not unfrequent products of antecedent inflammation; atony of the puncta and their canals, with a patulous state of the former, are also effects of the same cause. These different conditions are discoverable, by the greater or less resistance opposed to the introduction of the Anelian probes, and by the tears not finding a passage to the nose, while the puncta and the ducts remain unobstructed. In the state of parts first mentioned, the cure is to be accomplished by means of injections with the Vinous Tinct. of Opium, or other combinations of opium with astringents ; — mercurial and iodine ointments, and injections of the same preparations will present the best prospect of relief in the thickened state of the membrane, and in cases of atony and relaxation our dependence must be placed upon astringent solutions.

The introduction of Anel's probes, as here recommended, should be repeated as seldom as possible. Perhaps we can with difficulty ascertain the true condition of the lining membrane of the lachrymal canals without resorting to them. Being a necessary evil, they cannot in all cases be dispensed with; but in the absence of symptoms decidedly denoting a diseased condition of the membrane referred to, they ought not to be used, and when used, most cautiously managed. The irritation caused by them not unfrequently augments the original disease, rendering it more tardy in its termination and more dangerous in its consequences. A similar objection attaches in a measure, to the employment of the syringe. Whenever, therefore, the puncta are found capable of discharging their functious, ointments should hold a preference over injections.

2. *Dropsy of the sac.*—The diagnostic signs attending this form of disease are so strongly marked, that it can seldom or never be mistaken; unlike hernia of the sac, it often grows to a large size, assuming from the first a blue or purple hue, unyielding upon pressure, and incapable of being emptied either through the puncta or nasal duct. Its color, freedom from pain, together with the absence of other symptoms characteristic of inflammation of the sac, sufficiently distinguishes it from that affection.

External, topical applications are of little avail in the treatment of this disease, and so utterly ineffectual are they, that the first step to be taken is to lay open the tumefied sac throughout its whole extent; — its contents having been emptied, and a few injections of warm water thrown in, cautious exploration of the lachrymal and nasal ducts should next claim our attention. Having remarked under the former head upon the diseases of the puncta and their canals, and given the general outlines of their treatment, it would be supererogatory to repeat them here. An obstruction being found in the nasal duct, the plan laid down in this, the last division of our subject, is to be pursued; and should blennorrhagic symptoms of the sac remain, the course adopted in treating chronic inflammation of this organ, will be the one upon which our dependence must be placed. I am aware that the practice of laying open the sac, is by no means universally adopted; many resort to the plan of passing very fine silver probes through the puncta into the nasal duct, for the purpose of breaking down any obstruction which may there exist. This method, I conceive to be not

only difficult but even dangerous; and particularly where obstructions in the nasal duct are alone found, but too well calculated to produce a state of things in consequence of excessive irritation, which ought certainly to be avoided.

It has also been proposed to pass a seaton through the puncta, bringing it out at the nostril—either plan I believe to be objectionable; as, however, it would be anticipating the remarks I shall hereafter make upon this branch of our subject, they will not be enumerated here.

3. *Acute Inflammation of the sac.*—Multiplied experience testifies to the fact that inflammation of this organ, together with obstructions in the nasal duct, are most frequently complicated with fistulæ: we will therefore dwell somewhat more at large upon these affections.

Pure, idiopathic inflammation of the sac, uncomplicated with any constitutional taint, must be regarded as an unfrequent disease. It is, however, occasionally encountered, and its causes are those to which inflammation is commonly attributable. When unrestrained by appropriate remedies, or utterly neglected in its treatment, three distinct stages, characterized by their peculiar symptoms, may be observed—viz., of active inflammation, of suppuration, and, lastly, as I shall call it for want of a better name, its stage of declension. The disease is found to commence with a hard, circumscribed, bean-like tumefaction at the inner canthus of the orbit, answering in situation to the sac; in its inception this tumefaction is almost unapparent to the eye, although clearly discernible to the touch. As the inflammation and swelling progress, the pain, which at first was barely appreciable, oftentimes becomes acute, diverging from its primary seat, and the redness of the part assumes a more lively hue. The lachrymal canals become affected, the puncta are imbedded in the swelling of the lid, and their function of absorption being retarded, or wholly impeded, the tears fall over the cheek, and the nostril of the affected side is observed to be dry. It unquestionably sometimes happens that the lining membrane of the nasal duct becomes inflamed at this period of the disease; nor does the phlogosis stop here—the adjacent portion of the orbicularis muscle and cellular membrane are found to be implicated, and an appearance not unlike erysipelas is the consequence. As the disease advances towards its second period, a copious secretion takes place within the sac, distending this organ in proportion to its quantity, and if it be not check-

ed, causing its disruption.* The inflammation assumes a more shining and darker tint, a soft yellowish or whitish spot may be detected upon some portion of the inflamed surface, fluctuation is perceptible, and if the bistoury of the operator does not produce an artificial opening, a true fistula lachrymalis must be the result.

When either of these conditions happens, the disease is found to progress towards its period of decline; the remaining inflammation gradually abates, the contents of the sac having found an outlet are discharged, they assume a healthier aspect, the tears are observed to be mingled with them, and *sometimes* the fistula closes, or may be made to close by art.

True it is that such a termination has happened; and this is but the fair side of the picture. When a course so auspicious is found not to take place, the lining membrane of the nasal duct must be affected with induration or thickening, stricture or adhesion of its walls. As the consequence of either of these conditions, a repetition of the symptoms already enumerated must follow; it sometimes happens too, that the lachrymal canals are irreparably injured by the violence of the inflammation, or mismanagement, a state of things which possibly may require the ultimate destruction of the sac. The pathological remarks advanced under the first division of our subject may be referred to here; — they teach us that a failure of absorption by the puncta, or an obstruction in some part of the lachrymal canals, end in a simple stillicidium. The customary impression made upon the sac by the admission of the tears is wanting, and dropsy of this organ is the consequence. It has before been remarked, when speaking of this disease, that the nasal duct soon becomes implicated; did it remain, however, unimpeded, a constant emptying of the sac through this outlet, might, with the patient at least, claim a preference over its destruction.

It occasionally occurs, when the disease is suffered to run its course or our remedies have proved unavailing, that more than one fistulous orifice is formed. Nor do we always find that the external orifice is parallel with the opening in the sac; and the number of these fistulæ, together with a greater or less deranged condition of the system, will materially affect any prognosis which we may be called on to pronounce.

* By the process of ulceration, however.

Treatment. From the early severity of the inflammation attendant on the form of the disease under consideration, it often results that the physician is called upon to afford timely aid; when such is the case, the prognosis is a most favorable one, for we have the authority of an eminent French surgeon for saying that eight out of ten cases may be radically cured. The primary symptoms being those exhibiting a state of active inflammation, our remedies are clearly those, the agency of which tends to counteract this condition. Should the constitution of the patient be vigorous and sanguine, one or more general bleedings combined with judicious purgation should be premised; cold, evaporating lotions, gently astringent, may be used as local applications, aided by leeches and blisters behind the ears, hot, stimulating pedeluvia and a restricted diet. Such is the general outline of the treatment indicated in the first stage, and independently of personal experience, we can adduce the names of Prof. Beer, Mr McKenzie and M. Lisfranc.* Indeed, the latter gentleman appears to adapt this method of treatment to the commencement of the second period of the disease; for we find it reported in the Jour. General for May, 1829, that he had presented a case cured in fifteen days of "lachrymal tumor and *fistula*" to the French Academy. How far this method may be pursued, would seem to require nice discrimination, for should it be carried to too great an extent during the suppurative process, an obstinate blennorrhœa might result.

In event of the remedies here recommended having failed to produce a resolution of the tumor, the inflammation, as before stated, presents a darker and more shining aspect, a whitish spot is observable, and the second period is clearly established. Our antiphlogistic means should now be dispensed with, and after the use of warm poultices for a short time, it will be proper to resort to the knife, with which a full and free incision should be

* In the time of Heister, such was the treatment recommended in "slight fistulæ," a term at that time used to express what we would now call an inflammation of the sac — after advising the sac to be emptied by pressure with the finger, he continues his remarks by saying, "at the same time too, you must call in the aid of phlebotomy, purges, scarifications, blisters, diet and regimen, according to the patient's peculiar habits and circumstances," London edition, 1759.

Before this time, compression was resorted to with success, as is affirmed by the testimony of Dionis and Garengeot. But any method producing so much irritation as this will inevitably do, must be in direct opposition to all physiological principle.

made, whether in the direction of the fibres of the orbicularis muscle or not, is, I conceive, a matter of but little importance. After emptying the sac of its contents, we may attempt to diminish the suppuration from its lining membrane by introducing a small piece of lint moistened with the Vinous Tincture of Opium, or, what may be found equally as efficacious, with the subjoined preparation ; ℞ Plumbi Acetatis gr. ij.—iv. ; Pulv: Opii gr. j. ; Aquæ Rosæ ʒ j. M. The last stage is found to consist in an increased flow of mucus intermingled with whitish striæ, kept up by a long continued irritation of the mucous follicles ; solutions of the mineral astringents are the remedies best adapted to remove this condition of the organ, and on the authority of Prof. Beer I will insert the formula on which he seems mainly to rely ; ℞ Spermaceti ʒ ss., Hyd: Nit-Oxid: grs. x., Zinci Oxid. imp : grs. vi. M. A bit of lint smeared with this ointment is to be introduced into the incision made in the sac, having previously used the following solution as an injection ; ℞ Cupri Subacet : ; Potasæ Nit : ; Alumen: Sulph: *aa* grs. iii. to vi. Pulv. Camphor grs. ii. to iv. Aquæ distill : ʒ ss ; after dissolving and allowing it to cool, add Vini Opii, ʒ i. to ii. ; Aquæ Rosæ ʒ iv.

When chronic irritation has been principally confined to the sanguine capillaries of the membrane, a species of induration, termed by Broussais " red hardening," is developed as its result. While it continues, the organ cannot of course resume its healthy functions ; for its removal a camphorated hemlock poultice and the camphorated mercurial ointment have been advised on high authority. A similar pathological condition I have prescribed for in other mucous organs, and successfully treated by the following formula. ℞ Pulv. Argenti Nitratis, grs. ii. to iv. ; Liq. Plumbi. Acet., gtt. x ; Spermaceti Ungent. ʒ j. M.

Having thus obviated the various consequences of the previous inflammation of the sac, our attention should now be directed to the condition of the puncta and lachrymal canals and the nasal duct. Should the tears be found to escape through the opening made in the sac, this circumstance will be sufficient to assure us of their freedom from disease, and should they also find an exit through the nasal duct, we may then consider our patient as happily relieved. It only remains for us to close the orifice, which will sometimes be effected without assistance from art, by merely withdrawing the tent ; — should this prove unavailing we resort to slight scarifications for the purpose of exci-

ting adhesive inflammation, or one or two applications of the nitrate of silver may be required. When the puncta and their canals are injured, we follow the treatment already detailed; and the removal of obstructions in the nasal duct will form the subject of a separate consideration.

4. *Chronic or strumous inflammation of the sac.*—As the name which we have appended to this form of the disease imports, the symptoms will be found of diminished activity in comparison with those of the acute kind, and it may safely be said that a scrofulous predisposition is always present. The insidious nature of the affection, furnishing but little warning to its victim, prevents him from applying for assistance in its commencement, and even after its discovery should a warm and dry atmosphere succeed, he not unfrequently congratulates himself with the idea of its final disappearance; the return of cool, moist weather, dispels his delusion, and he has to contend with a tedious and disagreeable disease. Aid is rarely demanded until the morbid secretion from its lining membrane has measurably distended the sac; as in the variety already noticed, the tumor will be characterized by hardness and a bean-formed shape, but will differ from it by its almost total absence from pain and inflammatory redness. It is not very uncommon, however, during the continuance of the disease, for the sac to take on inflammation of a more active nature. The mucus secreted in its earlier stages is thin, and varies but little in color; but when the disease is further advanced it assumes a thicker consistence and a yellowish appearance. The patient's situation is for some time rendered comparatively comfortable, by the ability he possesses of disgorging the sac by pressure, either through the puncta or the nasal duct;—these outlets however are finally denied him by a gradually increasing thickening of their lining membrane, or a total obstruction; this obstruction oftener taking place in the latter canal than in the former.

The *proximate* cause of strumous inflammation of the sac is a subject concerning which some difference of opinion exists. It was the belief of Scarpa, and but few have embraced his doctrine in its full extent, that the lining membrane of the lids and the meibomian glands were first affected;—in consequence of inflammation, a viscid and unctuous substance is poured out from them, diffusing itself between the lid and the ball of the eye, and is finally carried through the puncta into the sac

The affection of this organ is regarded as the second step in the process, and fistula as *its* result. It is not our intention, however, to enter minutely into all the reasons advanced in behalf of these opinions, or to relate all the argument, used in refutation of them; our purpose will be attained by recounting a few only.

The author of the doctrine asserts that the lining membrane of the lids and the meibomian canals will *always* be found in a turgid condition, and covered with the sebaceous matter to which we have alluded; that pressure made upon the sac will cause a similar substance to regurgitate through the puncta, and that in the early stage of the disease at least, it may be entirely cured by addressing our remedies exclusively to the parts in question. These arguments have been answered by the assertion that inflammation of the sac is not the invariable consequence of a diseased condition of the eye-lids and the meibomian glands, — that the sac is sometimes affected without any disease attacking them, and that inflammation of this organ is often relieved, and fistula cured, without reference to the condition of the lids and glands. It is certain that these organs, together with the sac, are not unfrequently diseased at one and the same time; and it is possible that Scarpa might have been deceived when he supposed that he had cured a tumor of the sac by applying his remedies to the lids and meibomian glands only, by overlooking the fact that these medicaments were actually conveyed into that organ, by absorption through the puncta. In my own mind these objections are conclusive.

Inflammation of the schneiderian membrane, spreading itself to contiguous organs, may also be enumerated as one of the causes of this disease; and there can be but little doubt that the sac itself may be primarily affected.

Treatment. The activity or chronicity of the inflammation will of course modify and determine our treatment; as a general rule, however, it may be remarked that the lancet is seldom or ever to be used. Local bleeding may become necessary, and blisters behind the ears, kept constantly discharging by some stimulating application, (savin ointment) are oftentimes highly serviceable. The tumor, after pressing out its contents, may be rubbed with the camphorated mercurial ointment, or with the ointment made with the hydriodate of potash, a remedy on which I am inclined to place much dependence. The iodurets of mercury I have never seen used, but should infer their efficacy from analogy.

It is in this form of the disease particularly, that all unnecessary irritation is to be most studiously avoided, already too great, and where the sac is itself originally affected, soon extending to the lachrymal canals, we irretrievably fix its chronic character by the application of any harsh measure. For this reason then, injections with Anel's syringe are to be entirely discarded, and the use of his probes should be equally reprobated. Our means are to be confined to solutions dropped into the inner canthus of the eye, which will be carried by absorption through the puncta into the sac; — corrosive sublimate may be thus used, and the following recipe of Prof. Schmidt will also deserve a trial; ℞ Aquæ Rosæ ʒ iv.; Acidi Nit: ♃ i.; Alcohol. ʒ j. M. When the disease which Scarpa has described exists, the internal membrane of the lids may be smeared with the ointment of Nitrate of Silver and Goulard's Ex., the recipe for which we have given on a former page, or with an ointment prepared with red precipitate. The remediate power of unguents will not be confined to the spot upon which they are applied; — they too are capable of being absorbed, and will have a beneficial influence upon the disease of the sac.

These *local* remedies can hardly be considered but as adjuvants; constitutional treatment in this variety of the disease is never to be omitted, and in general terms may be said to consist in the use of the light and bitter tonics, the administration of the preparations of iodine. Where a strumous diathesis is manifested, plain, nourishing regimen, and exercise. Mr Abernethy's plan of treatment in disorders of the digestive organs will not escape the attention of the discriminating practitioner.

5. *Obstruction of the nasal duct, either by a diseased condition of its lining membrane, or by the interposition of external substances.*—This duct is not *always* affected in inflammation of the lachrymal sac, and we are inclined to believe that were the practice which we have here recommended diligently pursued, its occurrence would be still less frequent; the tardy application of proper measures, too, will sometimes insure a disease of the duct, while a more vigorous resort to the same means would operate a prevention.

The difficulty of treating with success the different affections of the mucous membrane of the nasal duct, has produced various methods for relief, and frequent modifications of the same plans. Before the time of Heister, compression over the lachrymal sac was resorted to; but as the application of this remedy

left untouched the seat of disease, it soon fell into disrepute, and is deserving of this passing notice only because it was once a practised remedy. Failing in this, the inventive faculty of physicians discovered another means by which they thought to obviate the difficulty, and the os unguis was subjected to the operations of boring and cauterization. Subsequent experience testified the uncertainty of this mode of proceeding, for it was found impossible in almost every case to prevent the orifice from closing, notwithstanding the artifices used to keep open the perforation. To this end, Woolhouse directed the frequent insertion of a metallic tube, and St Yves dilated with bits of wood cut into a wedge-like form, having first perforated the unguis with a trocar; he afterwards made use of linen tents dipped in cerate. Lemorriere sought an improvement upon this method by cutting out a portion of the bone with forceps which he invented for the purpose, dilating with bougies for some time, and then permitting the fistula in the sac to heal. These measures proved of no avail.

In 1712, the Duke of Savoy, who then labored under fistula, through fear, we are told, protested against this plan of boring the unguis, and Anel, who was his surgeon, invented the probes which now bear his name. In this case his success is said to have been perfect, but objections have subsequently been made, and certainly not without reason. His manner of using them consisted in passing them through one or both puncta into the sac, and from thence into the duct, until they appeared in the nostril; if he succeeded in accomplishing this, he imagined the whole difficulty was at an end, trusting the after treatment to medicated injections; — where a fistulous orifice existed in the sac, they were passed immediately into the duct, after doing which the fistula was healed as speedily as possible, and injections made with his syringe through the puncta.

Independent of the very great difficulty existing to the passage of the probes, (and particularly after their arrival within the nasal duct) from their extreme tenuity and flexibility, impinging as they must do upon its unequally thickened sides and thus meeting with an almost insurmountable barrier, other objections of still greater weight may be mentioned. The experience of Prof. Beer authorizes the assertion that their frequent introduction produces atony of the puncta and their canals, and the effect of this condition of things may be gathered from what has already been said; — irritation, exalted even to inflammation is also the frequent result, always difficult of cure

and often productive of more serious consequences. Besides, we gain but little towards a perfect cure by the simple passage of the probe, admitting even the influence which injections may subsequently have. The only true indication, is to remove the *morbid organization* of the membrane of the duct; the slightest reflection will satisfy us that this can never be accomplished by the introduction of the probe, and that in cases where much and extensive induration exists, the use of medicated solutions will oftentimes avail us but little.

The evils attendant upon the introduction of Anel's probes through the puncta, gave rise to other methods of treatment, and many who bestowed particular attention upon this disease were induced when no fistula existed to open the sac. Whenever the duct was found to be pervious, an attempt was made to restore its lining membrane to a state of health;—the indication is correct, but the variety of measures adopted to fulfil it prove the difficulty of its accomplishment. Bougies in some form or other have been universally used. It would be productive of no real advantage to trace out the different modes adopted by the physicians, particularly anterior to the present century; we will therefore not attempt the task, but confine our examination to the outlines of one or two plans of treatment which seem now to be generally embraced.

The practice recommended by Prof. Beer consists in removing as far as possible whatever disease may exist in the lachrymal canals or sac, before he commenced his operations upon the nasal duct; this end attained, he had recourse to catgut of greater or less size, according to the extent of the passage through the duct, which is smeared with medicated unguents and drawn through the nostril; he makes use of red precipitate, assisted by injections of corrosive sublimate. The little coil of catgut is attached by means of adhesive strips to the forehead, as a matter of convenience. At each successive dressing a fresh portion is drawn into the nasal duct, and as its lining membrane is gradually reduced to a healthier state and the passage becomes more free, a larger piece of catgut is used, until it is thought advisable to suspend it altogether. It may be proper to remark that when he found it difficult or rather impossible to pass the catgut into the nostril, he advised the frequent introduction of small probes, exerting at the same time some little force, until the duct became sufficiently pervious;—by this means success very generally attended his endeavors. The length of time always required to complete a

cure by the foregoing method, constitutes but a small objection to its adoption; fresh irritation is apt to be communicated to the sac and lachrymal canals, and affections of these parts as already explained may probably ensue.

After procuring a passage through the nasal duct, Mr Ware made use of the nail-headed style, a method of his own invention, and relates astonishing effects from its application; contrary to his original expectation, the tears were soon observed to pass through the duct, even while the style was still worn. Its application being rendered easier than the mode of treatment with catgut, it has received a decided preference. It is true that Mr Travers has opposed by the authority of his name, the practice of its remaining permanently in the duct; but as he has offered as a substitute a plan of treatment differing but little from that long since proposed by Anel, and as we have already mentioned objections to this which we think will apply with equal force to that of Mr Travers, we may well be excused from following it out in detail or adopting his views.

The length of time which patients are compelled to wear the style, and the frequent recurrence of the disease after it has been abandoned, authorizes the belief that Mr Ware and his advocates had not succeeded so well as they imagined. Its modus operandi cannot be explained but upon the principle of pressure, and long continued pressure is known to be frequently productive of ulceration; this ulceration then, or wearing away (if the term be allowable) is the only means by which the duct is rendered more and more pervious, and when the irritating agent is removed and the ulceration is impeded, it can create but little surprise that the condition of the parts for the removal of which we had recourse to the style, should sometimes recur. The true indication in fact, has not been fulfilled — the style has not changed the morbid condition of the lining membrane of the duct.

The difficulty of keeping this passage permanently pervious, after dilatation by bougies variously modified had been suspended, induced Surgeons to adopt the plan of inserting a tube or canula into the duct and then healing the fistulous orifice in the sac; — where they had perforated the unguis, the tubes were inserted into this artificial opening. This plan could not answer for two reasons; first, it only added to the irritation already too intense; and secondly, it was found impracticable to retain the tubes in their unnatural situation; — in this latter case the true reason was entirely overlooked, and it was vainly

imagined that a tube of different form might be constructed to answer the purpose. The inventive faculty of Pellier thought it had attained the desired end, by submitting to the consideration of the profession tubes with two projecting edges, and it was supposed that granulations shooting up into the space between them would effectually retain them in their position. Neither of these methods met with the anticipated success. A case occurred in France some years since, which ought forever to demonstrate the absurdity of this measure; a female had been operated upon for obstruction in the nasal duct, and the cannula had been allowed to remain in. — Three years after it was found to have ulcerated through the floor of the nostril, and appeared in the mouth! The case was reported to the Royal Academy by M. J. Cloquet, in December, 1826.

It has hitherto been our practice to resort to the mode recommended by Mr Ware in obstructions of the nasal duct; and when symptoms manifesting an obstruction indubitably existed, and were found not to yield during the treatment more particularly aimed at the disease of the sac, we have not hesitated to advise an early opening into this organ, in preference to the plan of probing and injecting through the puncta. Inflammation of the duct is unquestionably sometimes relieved by applications made immediately to the sac after its incision, or mediately through the absorbing power possessed by the puncta; even chronic phlogosis is susceptible of melioration in this way. But in this case, the tears have generally failed to find a passage into the nostril until some time has elapsed; fistula of the sac does not immediately happen, and but little indication exists for early probing the nasal canal. We believed Mr Ware's treatment the best and therefore adopted it, aware, however, of the objections which we have raised against its employment; we adopted it as the least of two evils, esteeming the plan of Professor Beer as entitled to the next place in our consideration.

Since commencing this essay, our investigations and reflections have been turned more minutely to this branch of the subject, and we have been led to think, perhaps vainly, that a course might be developed which would, to say the least, be liable to fewer objections than any other which has hitherto been suggested. This method of treatment is not original with me — I can only claim the merit (if any exists) of adapting views intended for a different purpose, to the disease in question. I do not come before the committee upon the recom-

mendation even of a single experiment, simply because no case has occurred to me since the idea suggested itself to my mind; but I feel some confidence in the opinion that the plan about to be detailed is not a chimera, and should subsequent experiment demonstrate its applicability, I shall feel no small satisfaction in having added something towards the alleviation of human ills.

Two years ago the treatise of Theodore Ducamp, "Des Retentions d'urine causes par le Rétrécissement de l'urètre,"* fell into my hands, which I need not say to those who have perused it, was read with no small degree of interest; and it is from the masterly manner in which he treats the thickenings and strictures found along the track of the urethra, that I have conceived the idea of adopting a similar practice to the diseased state of the lining membrane of the nasal duct. I am still further encouraged in the idea by having seen it stated by M. Gesnoul, surgeon of the Hotel Dieu at Lyons, that he had successfully treated several cases by means "of caustic introduced through the inferior orifice of the nasal duct." As the situation of the two canals is so totally dissimilar, the one being long and susceptible of great dilatation in comparison with the other, *all* the instruments employed by Ducamp will not be required, and modifications of those which we design to use will become necessary. It will also be impossible for me to give an *exact* description of the requisite instruments, because I am not thoroughly acquainted with the true diameter (if any difference exists) of all the parts of the canal; I have, however, made a partial examination, and should have prosecuted the subject to its completion had not a melancholy domestic occurrence suspended my operations. The difficulty of procuring a subject will not now allow me to recommence them in time.

The nasal duct may become obstructed in several ways; viz. by chronic inflammation, by a still greater thickening of a part or the whole of its lining membrane, by the existence of one or more indurations or strictures along its track, and by an ad-

*I was so forcibly struck with the superiority of Ducamp's mode of treating strictures of the Urethra, and believing that the development of a more energetic practice than that afforded by the use of the simple bougie, where the armed bougie was objected to, was still a desideratum with the profession, that I prepared a translation from the original work. I repaired to Baltimore for the purpose of obtaining recommendations from the Professors of that school, and should have gone further north; but on my arrival in B. I understood from Professor Smith, that the work had been already translated. This, together with other circumstances, frustrated my design — the manuscript is still in my possession.

hesion in one or more places of its opposite walls ; — all these conditions are the immediate products of inflammation, and the inflammation itself the consequence of the various causes heretofore mentioned. From long continued phlogosis the mucous membrane in all the organs is rendered susceptible of a morbid organization, which has been expressed by the term thickening or induration ; and upon the cessation of the active form of inflammation and when its chronic character is about being developed, it seems often to recede to one point, producing *there* an induration which has received the more appropriate appellation, perhaps, of stricture. Adhesion of opposite surfaces, for mechanical as well as physiological reasons is not very often induced.

The agent by which I conceive it possible effectually to remove the diseases of the nasal canal, is the Nitrate of Silver, and its operation is by no means limited to its escharotic quality. Experience has abundantly shown us, that it possesses in a surprising degree the property of so modifying the morbid vitality engendered in diseased tissues, as ultimately to produce their restoration to health, and one need only refer to Mr Higginbottom's essay on the use of this substance, to be convinced of its inestimable value. In painful irritable ulcers, fungous growths, &c, its use has long been known, and we cannot for a moment suppose that its beneficial effects are solely dependent upon its character as a caustic ; even in ophthalmia not strictly chronic, I have often resorted to a weak solution of it with the happiest success. The manner of employing it in the disease under consideration presents the only difficulty — we hope we shall be instrumental in its removal.

When chronic inflammation merely exists throughout the entire membrane of the duct, obstruction, as has been observed, does not immediately supervene ; in this instance injections with the Nitrate of Silver may be used with advantage. But when obstruction does take place, it results from thick mucus blocking up the passage in some portion of its tract, the secretion being furnished by the phlogosed membrane itself, and it may be too by the still diseased sac. The passage may be rendered pervious by means of probes adapted to its existing caliber, afterwards resorting to the caustic solution several times in the course of the day, preceding its use by injections of lukewarm-water and castile soap. When the sac is simultaneously affected, the same remedies may be used, in conjunction with others already recommended in blennorrhœa of this organ.

In circumscribed induration or stricture of the duct the leading object to be kept in view, is so to direct the application of the nitrate of silver, as to touch only that point where the stricture is situated. We are not, it is true, as in stricture of the urethra, liable to produce a false passage or hemorrhage by using either the simple or the armed bougie; but it is to say the least, wholly unnecessary to cauterize the healthy portion of the nasal canal if it can be avoided, and whenever this is the case an eschar must ensue, preceded by more or less inflammation. This inconvenience, it seems to me, may be obviated.

The nasal duct varies in different individuals, being from an eighth to an inch and a quarter in length, and its diameter will be found to be from two twelfths to two tenths of an inch in adults, in its healthy condition; in disease its caliber will of course be altered in different degrees, and the size of our instruments must be lessened in accordance. A description therefore of their application in any one case will be sufficient, the practitioner varying them according to circumstances. Before commencing a description of their application, let us state the indications to be fulfilled; and these are, first to destroy the stricture together with the "morbid disposition of the parts forming it," and then to produce a firm and durable cicatrix, reducing it to a perfect level with the remaining portion of the canal.

In pursuing these indications, the primary object to be attained will be, to find the depth of the stricture from the fistulous orifice in the sac, (or from the opening artificially made) its form and situation upon either side, or upon the anterior or posterior wall of the nasal canal, and its exact extent. To accomplish the first requisition, all that can be necessary will be to resort to admeasurement with bougies of proper diameter, on which are marked the divisions of an inch into lines or twelfths, (fig. 1) say, to the extent of two or three inches. The introduction of a bougie of this description will, when it impinges upon the stricture and is thus arrested in its progress, indicate the depth at which the opposing body is located. If that portion of the canal which is above the stricture be healthy, we may readily succeed in passing a bougie equal to the diameter of the duct as already given; if otherwise, the difference beteen the diameter of the one which we are enabled to pass, and the true diameter of the duct, will clearly indicate the degree of thickening it has undergone; a condition of things to be considered in another place. We will at present, for the

sake of perspicuity, describe the mode of treatment required where the stricture is the only diseased point in the duct. Having ascertained the depth at which the stricture is placed, our next inquiries will be directed to its form and situation, and this information is to be derived from taking its impression in relief; to obtain this, the following method must be pursued, and I shall describe it by taking an extract from my translation of Ducamp's work, only premising that the size of the instrument necessary to be adopted must conform to the existing caliber of the duct. Extracts from the same source will be made whenever they may answer my purpose, changing their phraseology according to circumstances.

To obtain the form of the stricture then, and the situation of its opening, "I use the following instrument, which I name the exploring sound; I have sounds, (or very small catheters will answer our purpose) opened at both their ends, upon which the divisions of an inch are marked; the anterior opening of these catheters ought to be about half the size of the other: I take a piece of silk, used in the formation of tapestry, which I tie into several knots, and after immersing them in melted wax, I round off this wax, as may be seen represented in fig. 2. By means of a small thread I pass this wax into the catheter, causing it to enter through the largest orifice; having reached the other opening, the roll formed by the knots charged with wax is retained, while the silk passes out and forms at the extremity of the catheter, a very fine and strong, soft brush, (fig. 3.) Further, I pass the silk through four small holes placed near the extremity of the catheter, again unite them by tying them together, and afterwards separate them in the form of a pencil, (fig. 4.) This pencil is immersed in a mixture made with equal parts of yellow wax, diachylon, shoemaker's pitch, and resin; I employ a quantity sufficiently large, that when made round it may equal the size of the catheter. After this wax mould has become cool, I press or work it between my fingers, and then roll it upon a polished surface. This kind of bougie appended to the catheter, I cut off about a line from the extremity of the latter, and round the wax into a shape similar to the end of a sound or catheter, (fig. 5.) Having made these arrangements, the wax mould being incorporated with the threads of silk, forms with them a body which cannot be detached. One of these catheters may be conveyed into the duct. Having reached the stricture, the instrument is there permitted to remain for a few moments, in

order that the wax may have time sufficient to become warm and soft, after which the catheter is pushed forward ; the wax being then pressed in between the catheter and the stricture, fills all the aufractuosities of the latter, penetrates into its opening, and moulds itself in a word into the various forms which it presents, (fig. 6.) The catheter is withdrawn with precaution, and I find upon its extremity the form of the stricture, (fig. 7.) If the stem of wax, *ee*, (fig. 7,) which has passed into the stricture, is situated in the centre of the mould which terminates the catheter, I know that the projecting parts which form the obstacle are disposed equally round its orifice, and that it is necessary to cauterize the latter throughout its whole circumference." If, however, the stem is found situated on the right side of the mould, we are assured that the projecting body is located on the left of the canal, and vice versa; if it be placed anteriorly, the projecting portion forming the stricture must be on the posterior wall of the duct, and when the contrary, on its anterior wall.

By following the plan just described, we obtain a certain knowledge of the situation of the stricture and its opening, and in order to know how far down we are to direct the caustic, it will become necessary for us to make ourselves acquainted with the extent of the opposing body. " For this purpose, therefore, I employ bougies (very fine) of gum elastic, which I cover with wax in order to receive the impression, in the following manner: a few threads of raw silk are selected and immersed in melted wax; this silk charged with wax is wound around the bougie, which is then rolled between two polished bodies; a bougie thus prepared I introduce into the canal, where it is permitted to remain for a few moments, and when I withdraw it a groove is impressed upon it, the extent of which indicates that of the stricture," (fig. 8.) When the orifice of the stricture is situated in the centre of the duct, there can be but little if any difficulty in introducing the catheter, provided we have one small enough to pass through it, and its size must be measured by that of the stem upon the wax mould ; if, however, the opening be not in the centre, some inconvenience may arise, but which may be obviated by an instrument, called, from the office which it performs, the conductor. This too is a catheter of proper dimensions, with a small projection at its extremity, the use of which is to throw its anterior opening upon either side of the duct, (fig. 9.) Upon this instrument the divisions of an inch may be marked, and

having previously ascertained the depth of the stricture from the opening in the sac, we know how far it must be introduced in order to reach it; we are also acquainted with the situation of its orifice, and if this be located anteriorly, the catheter must be introduced with its projection against the posterior wall of the duct, and vice versa; the same rule must be observed when the opening in the stricture is on either side. Being acquainted with these facts, and introducing the conductor in conformity with them, its orifice must necessarily be situated over that of the stricture, and it then only remains for us to carry the small waxed bougie through this conductor immediately into it, (fig. 10.)

This operation informs us to what extent the caustic is to be applied, and the manner of its application may be thus described. The instruments used for this purpose by Ducamp, when operating upon the urethra, are somewhat complicated; we shall adopt the principle and discard the complications. A cylinder of platina five lines in length and half a line in diameter, (by possessing several of these instruments, however, of different proportions, the chance of success will be increased) is to be attached to a gum elastic tube or silver cannula of the same thickness, and four or five inches in length, on which the divisions of an inch into lines may be inscribed. At the distance of a line from the anterior extremity of the platina cylinder, a deep groove is to be made two lines in length and a quarter of a line in breadth; into this groove small bits of caustic are to be laid, and afterwards fused by directing the blaze of the blow pipe underneath the cylinder. We have an instrument then as represented in (fig. 11.)

Should the opening in the stricture be situated in the centre of the canal, we may carry a gum elastic tube or cannula down upon it, for the purpose of shielding the healthy portion of the duct from the action of the caustic, through which the instrument charged with the nitrate of silver may be introduced;—its introduction will also be rendered easier by adopting this method. With whatever little resistance the port-caustic (as Ducamp calls it) may pass into the stricture, we know that it has arrived there from our previous knowledge of its depth; and from having also ascertained its extent and situation, we are at once aware how far the port-caustic is to be introduced, and whether it may be necessary to direct the caustic on all sides of the duct. If, however, the obstruction be situated upon any one side of this canal, by using the conductor (fig. 9), and

so directing it as to place its orifice over that of the stricture, we can without difficulty introduce the port-caustic, and direct its application upon that point of the obstacle alone which we design to touch; fig. 10 will sufficiently illustrate our meaning. It may probably become necessary to apply the caustic every three or four days, and by occasionally taking an impression with the wax mould, we are made sensible how far the stricture has been reduced.

I am well aware that cases may frequently occur where the difficulty would be exceedingly great, in introducing the port-caustic or even a catheter of smaller dimensions; but knowing, as we should do, the situation of the opening in the stricture, and being enabled to carry an instrument immediately into it by means either of the straight or the projecting conductor, there can be no impropriety in resorting to force in accomplishing our object; and having succeeded in this, we may afterwards make use of the port-caustic as directed. In applying this forced catheterism, it is probable we might not succeed with a bougie on account of its pliability; a metallic probe of proper dimensions will no doubt answer the purpose.

By proceeding in the way we have advised, we shall, by a few applications of the caustic, not only destroy the stricture, but we shall have changed the morbid vitality of the diseased point. It is probable that the treatment might end here; that the opening in the sac might be allowed to heal and that no recurrence of the disease would happen. Should, however, experience dictate to us the necessity of subsequent dilatation, it may easily be accomplished by bougies adapted to the caliber of the duct. To prevent unnecessary irritation upon the healthy parts of the urethra, Ducamp uses an instrument which he calls the bellied bougie. Such a one in form would well fulfil the intention we have in view, (fig. 12). The bellied portion of the bougie, must be made to answer in size to the natural diameter of the duct, (say two lines) while the remainder of the instrument would be a line or even less in diameter. The belly is to be placed within the strictured point, or rather where it once was; it here exactly fills the duct, sustaining the proper degree of dilatation, while its remaining portions are untouched by any other part of the bougie. These dilators may be made of metal, and need only be worn for an hour or two daily.

Thickening of the whole lining membrane of the duct, is frequently one of the complications against which we are call-

ed to contend, and its degree may be estimated from the difference between the size of any probe which we may be able to introduce, and the healthy caliber of the canal. In this case, our operations with the nitrate of silver will be directed against different portions of the diseased membrane at different times, using a straight conductor to shield that part of it which it may be unnecessary again to cauterize. This method may possibly be somewhat tedious; if so, we can easily construct a port-caustic, having its groove the whole length of the duct, and thus apply the caustic at one operation to every part of its membrane. Before every application of the caustic, injections of warm water may be used for the purpose of washing out the detached eschars; or if this be not sufficient they may be carried into the nostril by a probe.

In cases where the opposite walls of the duct have adhered, Professor Beer perforates the obstacle with a sharp pointed probe, provided it be situated near the nasal extremity of the duct; he then resorts to dilatation and the use of the catgut. Should the duct be impervious throughout a larger portion, or the whole of its extent, the question has been asked, what is now to be done? Two methods, I believe, have been pursued; either to pierce the unguis, and thus obtain a new passage for the tears, or entirely to destroy the sac; against the first of these plans, I have protested in another place; and I can hardly believe that the last will ever become necessary. If the duct can be opened by a sharp probe when the adhesion is located near its extremity, I can see no reason why we should not adopt a similar practice, whenever it occupies its entire length. There can be no difficulty in properly directing the probe or bistonry; and if the obstruction does not extend throughout the whole duct, the operation may possibly be facilitated by using a conductor through which the probe may be passed. Having forced a passage, we may dilate for a few days, and then apply the caustic.

It can hardly be said that I have done more than present the outlines of a plan of treatment, which I believe to be practicable; if it be found so, the advantages it possesses over every other will be twofold; — the disease will be remedied in much less time, and no danger of a relapse need be apprehended. Experiments hereafter to be made, will no doubt suggest modifications in the instruments, whereby they may be better adapted to the parts on which we are to operate; — they may indeed lead to the invention of new ones, and certainly establish the

proper size of those which we may find useful. It is probable too, that instruments constructed exclusively of metal may be preferable.

In conjunction with the mechanical part of the treatment here recommended, measures adapted to the deranged condition of the system, as advised on another page, are not to be overlooked; it is unnecessary to repeat them here, except so far as to reiterate the confidence I feel in the administration of the preparations of iodine. I believe that these chronic derangements of the sac and nasal duct, are nine times in ten complicated with a scrofulous diathesis; and in other scrofulous diseases, I have repeatedly used this remedy with success.

Much has been said by the old writers upon this disease, about caries of the bones, and something by the moderns. This complication, however, is exceedingly unfrequent, and when it does occur, our exertions should be directed as far as possible to the preservation of the natural passage into the nostril. As local measures, the mineral acids and metallic astringents are advised, and Dr Nichol highly extols the use of nitrate of silver. When it is the result of constitutional disease, as in the case under consideration it most frequently is, internal remedies will be demanded, and they are such as will depend in every case upon the peculiar condition of the system.

Cases have been related in which the disease we have investigated, has been induced by external substances; as for instance, by a polypus blocking up the nasal extremity of the duct. The removal of the obstruction will *generally* be all that is required.

March, 1832.

By an order adopted in the year 1826, the Secretary was directed to publish annually the following votes:

1st. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which the premiums may be adjudged.

2d. That in case of the publication of a successful dissertation, the author be considered as bound to print the above vote in connexion therewith.

Art. II. — The Massachusetts Charitable Eye and Ear Infirmary.

This institution was commenced, in Boston, by its present surgeons in the latter part of the year 1824, from a conviction of its utility and importance, derived from what they had known of similar institutions in other countries and from the amount of disease which they knew to exist in this place and its vicinity. They did not, however, feel authorized to appeal to the public for assistance, before they were able to furnish sufficient facts to prove its necessity. — They accordingly conducted it as a measure of experiment, at their own cost, for about sixteen months, when its importance seemed to be so fully shown by the amount of disease treated, and the success of their exertions that in March, 1826, they thought it expedient to bring its claims to patronage before their friends. It was immediately adopted as a public charity, to be supported by private contributions. The number of cases in the first report of the surgeons was 856. At the annual meeting of the subscribers in March, 1827, the surgeons reported the number of 654 cases. In February, of that year, they were incorporated by the Legislature of this Commonwealth, with the requirement to hold their annual meeting on the last Thursday of October. — The situation of the surgeons has precluded them from an opportunity of pleading its merits, and as it has not hitherto been aided by other individual exertions, its pecuniary resources have been very limited, which has materially influenced the amount of good effected by the institution as a charity, and in some measure curtailed the scientific investigations of the surgeons. — After the annual report by the surgeons was made in 1828 to the subscribers, a committee was appointed, consisting mostly of the most respectable clergy of the city, to investigate the merits and the wants of the institution. Their observation of the occurrences at the rooms and the perusal of the Reports of the surgeons led to the following conclusions:—

1st. *That diseases of the eyes are eminently the diseases of the poor, and mostly of the industrious poor.* Although a great portion of the applicants at the rooms are not absolutely paupers, it is apparent that many in our community may become subjects for a charity like this, if deprived, by any affection of the eyes, of the means of providing for their daily sup-

port. — Of this class are journeymen mechanics, tradesmen, females of small income, and various individuals whose means make them independent while in health, but who are unable to provide relief when afflicted with these diseases. By the rich complaints of the eyes meet with attention in their early stages. By the poor they are neglected from necessity. And as the tendency of these diseases is to increase, a vast number of cases terminate, if not in blindness, at least in distressing complaints, preventing the use of the organ, which, by an early attention, would have admitted of an easy cure. — "It has been stated," says a report of the New York Eye Infirmary, "by the medical attendant of the Alms-House at Bellevue, that a considerable number of paupers are annually received and supported there, who have been reduced to the necessity of subsisting on the public bounty, by loss of sight, induced by diseases which might have been cured by attention in the first instance." But it is not necessary to go abroad for support of this fact. It appears that several cases have occurred of relief, of individuals who were confined in the houses for the poor in this city and the neighboring towns, who, but for their relief, would have continued to be inmates of the alms-house. And it is found that there are, in almost every alms-house, cases of incurable blindness, which, in an earlier stage, admitted of cure. Mechanics, by their occupations, are of necessity much exposed to injury of this tender organ; some of its diseases being almost confined to this important class of our citizens; and industrious females who depend upon their exertions for daily support, are at once rendered destitute by the deprivation of sight; or by any such annoying or painful disease as may deprive them of the use of that organ. So that the number of the community who may become subjects for this charity, is manifestly very considerable.

2d. *That eye infirmaries are the only places where the poor will apply, for the relief of that organ, in most of its diseases.* Previous to the establishment of eye infirmaries in Europe, and this country, there does not seem to have been any amount of disease of these organs treated; although in every place where they have been founded, there have previously existed hospitals, dispensaries, and other places, where treatment might have been sought. But to the eye infirmary they have always resorted without hesitation.

3d. *That an infirmary is best calculated to afford means to acquire information of these diseases, and to disseminate a*

knowledge of their treatment. This is manifest from the great number of cases which apply to such an institution, comprising all the various diseases of these organs, and thus giving an opportunity for observation and discrimination, which could not have been acquired in the limited private practice of the surgeons. To the student of medicine also, it affords not only an opportunity for obtaining a knowledge of these diseases but an ample field for illustrating principles in surgery and medicine, which can nowhere be so well explained.

4th. *That these diseases admit more frequently of relief than the Medical Profession formerly considered; and much more generally than the public mind has been apprised of.* From the reports of the surgeons it appears that seven eighths of the cases which they treated, have been cured or relieved; and it is probable that a much larger proportion could have been relieved, if they had been in every case properly discriminated, and treated, in their commencement.

5th. *That the amount of disease of these organs is vastly greater than would have been anticipated.* It is sufficient evidence of this fact to state, that up to this time, about 4000 patients have applied to this institution, especially when it is considered, that the institution has been very partially patronized, and even embarrassed in its operations.

6th. *That the amount of benefit conferred is incalculably greater than the amount of means expended.* When it is considered how many have been cured, and relieved, and how little has been expended, it is apparent, that no institution of equal pecuniary ability can vie with it in importance, or is capable of effecting an equal amount of good.*

7th. *That it has been conducive to public economy,* by reducing the expenses of the city for the support of the poor; — and not only by directly releasing several from the almshouse, but indirectly by preventing many from seeking that last resort of the afflicted.

8th. *That these diseases are by their nature of a character more deeply interesting than any which affect the human frame.* This might be shown by detailing cases which are continually occurring at the rooms. But it is made sufficiently apparent from the facts, that these are the diseases of those organs, which constitute a large portion of the comfort and usefulness of man. Here, the disconsolate tenant of the poor,

* The expenses of the Institution are now about $300 per annum.

house has been restored to cheerfulness and social life. Here, children, born by the providence of God without sight, have by his blessing been brought to see and enjoy the works of nature and the word of life. Here, many have been restored to the privilege of Sabbath and weekly schools — and here, in fine, very many in almost hopeless blindness, or deaf, without any expectation of relief, have been restored to domestic comforts and social joys, and civil and religious duties. This history of the rise and progress of the Infirmary in Boston, in connexion with its utility, may serve as an inducement to establish similar institutions in other places; for which purpose it is inserted in this Journal. But as it is the statistical accounts of the diseases which come under the cognisance of the surgeons, together with such pathological remarks and deductions as arise from a review of the cases, which will most interest the medical practitioner, it is intended in future numbers of this work to detail from time to time such cases as may serve to promote the knowledge of this particular branch of surgery, or aid in other ways the cause of medical science.

Art. III. — Dr Miner's Remarks on Cholera.

Messrs Editors, — As an imperfect acknowledgment of your polite attention, I transmit to you the following statement of the first case of malignant cholera that I have seen, and the only one of the kind, to my knowledge, which has occurred in this town. The patient belonged to Dr Austin, but he soon called for the assistance of Dr Harrison and Dr Dyer, two physicians who had visited New York, and had seen numerous cases of the prevailing epidemic. The patient was also seen by most of the other medical gentlemen of the place.

Yours respectfully T. M.

Middletown, Con. August 28, 1832.

Case of Malignant Cholera, taken from minutes made by the attending physicians, together with additional remarks. By Thomas Miner M. D.

Oliver Smith, aged 45, by profession a butcher, on Saturday

August 25th, 1832, was affected with diarrhœa, to which he had been occasionally subject. He continued in his employment through the day, and it appears that the disturbance of the bowels ceased during the greater part of the night. On Sunday morning at 3 o'clock, the diarrhœa returned with redoubled violence attended with light spasms, so that between that time and mid-day, he calculated that he had as many as thirty copious dejections of a fluid nearly colorless, except that it had the tinge of dirty water. At 12 o'clock he was seized with violent spasms of the legs and lower extremities, upon which a physician was called, who arrived within half an hour. He found the patient with a haggard countenance, expressive of great anxiety. The spasms were very severe, and by turns attended with such agony that his cries were heard in houses at a considerable distance. The skin was cool, there was a slight nausea, the tongue rather cool and covered with a light fur, and the pulse nearly extinct at the wrists. By external and internal remedies, the diarrhœa and cramps were soon very much relieved, a tolerable warmth was produced, though particular parts of the body frequently became cool, and a moderate sweat appeared on the surface. But this was all that could be effected. The general torpor, or insusceptibility of the system to the exciting effects of remedies, could not be lessened, and though the skin was sufficiently sensible to external applications, no additional force could be communicated to the pulse and sanguiferous system, by any means which were considered as proper to be employed. About three o'clock, P. M. there was a copious involuntary dejection of a colorless and limpid fluid. The skin in places became dark colored and corrugated, and one arm livid, the hand being contracted and closed by tonic spasm, and appearing much as if stained with a black dye, while the nails were purple. Slight clonic spasms were occasionally manifest, through the whole disease. A considerable part of the adnata of each eye appeared to be infused with black blood, which had a margin as distinct as if the blood had been extravasated by an external injury. Though the mind was weakened, there was neither coma nor delirium. As the patient sunk into the dying state, he gradually lost his senses, his condition being not unlike the state which often attends the dying, but very different from the deep coma or apoplectic stupor, which is sometimes seen in low fevers. The powers of life sunk so rapidly, that he appeared to be actually dying,

by 3 or 4 o'clock, P. M. He continued in this state, gradually failing without any revival or reaction, till about half past 7 o'clock in the morning of Monday the 27th, when he expired.

It was between 3 and 4 o'clock in the afternoon, after the violent spasms and diarrhœa were in a good degree checked, and the body had become tolerably warm by external heat, that I first saw the patient. He appeared now to be suffering very little pain or distress, though his ghastly countenance, a kind of inanimate feel of the skin, its peculiar tinge, the evanescent pulse, and the combination of circumstances, seemed to indicate, that nearly the whole vitality of the system had been exhausted and extinguished. The single, copious, involuntary dejection of a limpid fluid occurred soon after my arrival.

Had I been unable to learn the previous history of the case, I should have unquestionably taken it for a specimen of the *critical* and fatal sinking of typhus syncopalis. Except the peculiar and definite suffusion of the eyes, which supervened some hours before death, and the copious limpid discharge from the bowels — and these might easily have been supposed to be accidental circumstances — there was no single appearance of any importance, which I had not occasionally seen in those cases of pure, fatal sinking, when they occur without much delirium or coma, in the severest epidemics of typhus syncopalis. Instances of this kind have not been very rare, when the attack of sinking typhus has been so violent as to destroy life during the first paroxysms of sinking, or when a paroxysm of critical sinking has supervened, after the disease has been present for several days. The color of the hand and arm was not different in kind, though it was greater in degree, than I recollect to have before seen; but I had frequently met with much deeper and more general livor of the whole skin.

However, the coincidence of single symptoms, or of particular stages of diseases, do not necessarily constitute identity; the whole history of the common symptoms, and of the regular stages, must be taken into the account. In this view of the subject, I have no doubt, that malignant cholera and sinking typhus will be found to be *distinct species*, though they obviously belong to the *same genus*. Here it is necessary to observe, that it is only the common, regular cases of each disease that are to be compared; the anomalies do not at present come under consideration.

1st. Cholera has usually but one paroxysm of sinking, which is commonly called the state of collapse.

2d. It is almost universally attended with a local affection of the bowels producing a colliquative diarrhœa.

3d. Spasms in the calves of the legs and extremities are a very prominent symptom.

4th. The general state of the system in cholera, though at first view it resembles that of sinking typhus, on examination will be found to be commonly much more torpid.

The following are among the more prominent traits of sinking typhus.

1st. It has usually various and periodical paroxysms of sinking, before the fatal sinking, or collapse, supervenes.

2d. It is very generally attended with a peculiar state of the brain, which is very liable to be followed by delirium or coma.

3d. Spasms are probably not more common in sinking typhus, than in other severe nervous fevers.

4th. Irritability more generally preponderates in sinking typhus. There are divers other circumstances worthy of notice.

Pure *gastric sinking*, or a deathlike sensation in the region of the stomach, is one of the diagnostics, and is met with in every case of sinking typhus, in which the patient has his reason sufficiently to describe his feelings. Though something like this is noticed in almost all the writers on cholera, it does not appear so distinctly marked, and seems often to be overwhelmed and blended with the other symptoms.

Owing to the great preponderance of torpor, in cholera, various and opposite remedies often appear to do, for the present, very little good or harm, and occasionally from their shock, rouse the system and remove the disease, apparently in opposition to all the rules of good practice. This is far from being the case in sinking typhus. Every depleting, refrigerant, or exhausting practice always sinks the patient, and often fatally. An ill-judged emetic, cathartic, or venesection, in a severe case, is almost sure to destroy life; and in the mild cases, it retards the cure. Even the lightest cases, which need only moderate treatment, if it is right in kind, are always made severe and dangerous by injudicious means. Instead of being so severe and obstinate as to require rivers of laudanum and brandy, as is generally supposed by those whose attention is only attracted by the reports of bad cases, a great majority of the patients in sinking typhus recover under a very light treatment.

In Europe and America, though it is said not in India, chol-

era generally gives sufficient warning to enable us to ward off the attack. This is not so often the case in sinking typhus, and when its premonitory symptoms are noticed, it is frequently very difficult to prevent the development of the disease. A consecutive fever very generally follows the first paroxysms of sinking in typhus syncopalis, and retains more or less of its sinking character. In cholera, when the collapse is prevented or removed, very frequently health is soon restored. Though there is sometimes a revolution of sinking typhus upon the cessation of the first paroxysm of sinking, yet under the most favorable circumstances it is commonly a disease of five or seven days, and it is often protracted much longer. It is a fact, whether the best practice or not, that incipient cholera is often removed by active cathartics. Such measures, during the predisposition to sinking typhus, are very certain to confirm the disease in its severest forms. In the mildest cases, no purgative can be suffered to operate freely, more than once, without the most imminent danger.

Contingent contagion, under certain circumstances, belongs probably to every malignant disease; but in other cases, and under proper cautions, it is so trifling as hardly to deserve notice. There seems to be no question, but that in three places out of four, and perhaps nine out of ten, cholera may be satisfactorily traced, on its first appearance, to communication with foreign emigrants, or fugitives from infected cities. In this respect, it differs essentially from sinking typhus, which is evidently, in almost every instance, of spontaneous, local origin.

In the preceding remarks, it is taken for granted, that the reader is familiar with the writings of North, Page, Strong, and others who have described the sinking diseases of our country, as well as with the most authentic accounts of malignant cholera, as it has appeared in the various parts of the world. It is not here intended to enter into a minute description of either disease, much less to notice all the possible varieties or deviations from the general rule. Cholera is sometimes without any striking premonitory symptoms, and it is not always attended with diarrhœa; and though constipation is a common and favorable symptom of sinking typhus, yet it sometimes begins with a diarrhœa. Instead of delirium or coma, typhus syncopalis is sometimes attended with a morbid quickness and clearness of intellect; and coma or delirium is occasionally seen in cholera. It is needless to pursue these peculiar traits any further in this essay.

A few further remarks may not be ill-timed upon the case

which is the immediate cause of this communication. In the first place, the patient, though not a drunkard, but an industrious citizen who supported his family very comfortably, is nevertheless said to have been in the habit of daily drinking spirits very freely. It is well known, how poorly able such subjects usually are to bear up under any severe, acute, febrile disease. After the great inanition from a terrible colliquative diarrhœa, of upwards of nine hours, to say nothing of that of the preceding day, when the violent spasms seized him, he sunk so rapidly, and the case seemed to be so desperate, that there scarcely appeared motives sufficient for making any great exertion. Nevertheless, he was not neglected. External heat was liberally applied, with mustard cataplasms, and thorough frictions with mercurial liniment, combined with camphor, capsicum, and oil of turpentine. Opium, with hot brandy and water, and a large dose of calomel were given. These measures evidently mitigated the spasms and diarrhœa, and restored the warmth ; but they did nothing more, except that they probably prolonged life for many hours, because it must have been much sooner expended, had such exhausting symptoms been suffered to continue.

An enema of half an ounce of oil of turpentine and two drams of laudanum was given about half past three o'clock in the afternoon, but without any perceptible effect, doing neither good nor harm, nor making the least impression.

It seems to be certain, that such a shock given to the solids of the body as occurs in the extreme paralytic torpor of this disease, if it has continued any length of time, and has conjoined with it an almost entire waste of all the serous fluids, from the very nature of the case, must ever be beyond the reach of human art. The patient is in a sense in *articulo mortis*, struck with the hand of death, before professional assistance is called. The wick, although still glimmering in the lamp, is already burned to a snuff, and all the oil that we may add, will never give it consistence sufficient to blaze anew, though we may help it to smoulder a little longer in the socket.

These remarks apply to such cases as are actually moribund, when they are first offered for professional treatment. But since we have no positive standard by which such cases can be certainly ascertained, it is undoubtedly our duty to try all rational means to ascertain whether there is not sufficient latent vitality, that may be still brought into operation. When the waste of the fluids has not become extreme, or the

sunken, collapsed state has not continued long, however unfavorable the first impression may be, there is always a sufficient prospect, to demand our most energetic exertions. If these are only made upon the same principles as those by which we are guided in combating severe symptoms in other diseases, we shall probably be surprised much more frequently by success in unpromising cases, than we are disappointed by the failure of our most flattering hopes.

Art. IV. — Cholera in Boston.

After abundant indications of its approach, in various forms of kindred disease from slight diarrhœa which was unusually prevalent in the city and vicinity, to the smart *cholorine* which manifested itself in so extraordinary a manner iu the Prison at Charlestown, the Cholera made its appearance among us in an unequivocal shape on the 15th of August, in two cases which were communicated to the Health Commissioners, in the following reports and certificates.

Gentlemen, — I consider it a public duty to make the following report. I was called at 5½ o'clock this [Wednesday] morning to visit Miss Elvira Lord, in South-street-place, and found her at 6 o'clock in the collapse stage of cholera asphyxia — was informed that she retired to bed at 10 o'clock last evening in good health — was seized with vomiting and purging soon after, which continued without intermission until I visited her, when her symptoms were as follows; countenance sunk and very distressed; skin cold, flabby, *wet*, and inclined to a bluish tint; strong spasms ascending from the feet to the abdomen, attended (of course) with severe pain; contents of stomach and bowels, as exhibited in vessels, resembled an ounce of flaky rice mucilage floating in a pint of clear spring water; the pulse at the wrist was at that time perceptible, but very fluttering; the tongue was lukewarm, with a thin, dirty white fur. At 7½ A. M. Drs Bigelow and Ware visited with me; pulse at the wrist and extremities then imperceptible; in the carotid artery, 120; tongue and breath cold; spasms subsided; no pain; skin of the hands, &c, corrugated, blue, with cold clammy sweat, excessive thirst, and craving for cold water. The thermometer applied to the chest and inside of the hands, rose a little above the temperature of the atmosphere. Except the gradual increase of blueness, the sunk and pinched appearance of the countenance, there was little alteration of the above symptoms until death, which took place at 2 o'clock, P. M. Twenty minutes after

death, there was spasmodic contraction of the toes of the feet, and of the fingers.

The subject of this report was about 25 years old, of good moral character, and temperate habits; has resided in Short-street for several years, and South-street-place for a few weeks — has not been out of the city in that time, except to Roxbury a few weeks since, and has not met with any persons from infected places — the patient was examined after death by the subscriber.

DAVID OSGOOD, *Attending Physician.*

BOSTON, AUG. 15, 1832.

The undersigned, having been called by Dr Osgood, to visit in consultation the patient above-mentioned, express their decided opinion, that the case is one of Spasmodic or Malignant Cholera.

JACOB BIGELOW.
JOHN WARE.

The subscribers having attended to the *post mortem* examination of the foregoing case, concur in the opinion expressed above, as to the nature of the disease.

JOHN C. WARREN,
GEORGE HAYWARD,
JOHN RANDALL.

GENTLEMEN, — I was called this afternoon about one o'clock to a maiden lady about thirtyfive years of age, by the name of Foster, belonging to the family of Mr Stillman Worster, at No. 18 Atkinson-street. She was attacked with vomiting and purging about two hours previous, which still continued with slight spasms; was able to walk about the room, saw her about half past three, found her extremities cold, pulse very small, great blueness about the neck and under the eyes, skin generally shrivelled, particularly on the hands and feet, with a cold moisture over the body, vomiting and purging ceased, slight occasional spasms of extremities. Having no doubt that it was a case of spasmodic cholera, I called in Drs. Adams, Bigelow and Wood, who concurred with me in the same opinion. She died about half past six. The post mortem examination took place about three hours after death; the appearances were such as to confirm the physicians present, that it was a decided case of malignant spasmodic cholera.

Yours respectfully,
A. SEATON, M. D.

Boston, Aug. 15, 1832.

Aware of the importance of an accurate knowledge of all the circumstances attending the first manifestation of the disease in the city, the Board appointed a committee to institute an immediate and thorough investigation of all matters and things which could be supposed to have had any causative agency in the occurrence, and below is their Report. We beg leave to repeat an exhortation which we took the liberty to address in a former number to physicians and health officers, throughout the country, to make similar examinations of all the

cases of decided Cholera which may occur within their respective circles of observation, and particularly of the first ones. The examination should be made immediately, on the spot, before any material facts become unattainable through forgetfulness or other causes; and the result faithfully recorded. It is only by an impartial and discriminating analysis and comparison of a great multitude of such results, that we can hope to arrive at any satisfactory knowledge of the laws of the disease, — an attainment, which as yet, is not less the "convicium scientiæ," than the treatment of it is the "opprobrium medicinæ."

The Committee appointed to examine the premises on which the two cases of cholera which have been reported, occurred, and also to ascertain the other important facts in relation to their occurrence, ask leave to submit the following statement as comprising all the material particulars and circumstances associated with those interesting events which they have been able to verify.

The first case was that of Miss Elvira Lord, a single woman, aged 25 years, of comfortable circumstances in life, and not known to have been addicted to any indulgences which are thought to create a predisposition to the disease of which she died.

Although not often sick, her constitution was not considered so robust as that of her associates; but she was bold and persevering in labor, and generally able to accomplish as much as others of her age and station. At the time of her death she resided at the house of a married sister in South-street-place, where she had lived some time previous.

The house in which she lived is a small brick building, standing on new made land,— but although the situation is low, it admits of pretty effectual ventilation. The house appeared to be clean and pure in every part, the drains unobstructed, the cellar dry, and the premises and immediate vicinity exhibited nothing calculated to generate or sustain a pestilential atmosphere.

It appears that Miss L. was an intimate friend and associate of Mrs Foster the other subject of cholera, and a frequent visitor at her residence in Atkinson street. She was there on Monday previous to her death, and passed a considerable portion of the afternoon and evening with Mrs Foster, assisting her in taking care of one or more persons who were then sick in that house. They took tea together in the evening, the meal consisting of *bread* and *but'er* and *custards*, with tea. It does not appear that Miss L. took anything else that evening except a draught of cherry rum and water, as will be noticed presently. She left the "Rand House" after 9 o'clock, and went immediately home — stopping only a minute by the way at her sister's in Short street.

On Tuesday she was at home in the forenoon and appeared to be well, took for dinner *brown bread and milk*, with *whortleberries*. At about 5 or 6 o'clock took tea with *hashed corn beef, and potatoes* and *cucumbers*. In the course of the evening she went to Atkinson street

again to visit Mrs Foster; how long she stayed there is not ascertained — it was after tea before she arrived, and it is believed that she left the house about nine o'clock. On her way home she called at her sister's in Short street, tarried but a few minutes, and neither ate nor drank anything while there.

She went to bed about ten o'clock, without having complained of any illness, and was seized soon after with vomiting and purging, with which she was exercised pretty constantly through the night. The family were called about four in the morning, and were desirous to have a physician, but the patient objected. Some camphor was then administered; but to no good purpose. Dr Osgood was sent for, and arrived about half past five, when he reports the patient to have been in a state of collapse. The speedy termination of the disease, as well as its character and designation are before the public in the certificates of the physicians.

The second case happened at No. 8 Atkinson street, in a house familiarly known as the "Old Rand House," from its having been formerly owned and occupied by a distinguished physician of that name. Its situation is low and uncommonly inaccessible to currents of fresh air. The building is of wood, and is in a ruinous condition, and has been deemed, for some time past unworthy of repairs and scarcely habitable. In front is a large yard covered with rank grass, which has been suffered to fall and decay where it grows. It is also partly overshadowed with trees which tend to keep it perpetually damp. In the rear, the outhouses are falling to pieces, the drain is obstructed so that the waste water has been permitted to flow over the surface, and every part of the premises exhibits the decomposition either of recent or time-worn vegetable matter. The establishment was visited by the Health Commissioners of the district soon after the present Board was established, and was noticed as a suspicious place. The cellar, which was wet and close, was directed to be ventilated, and frequently strewed with disinfecting substances, and this had been done.

The tenants of the house were also warned that it was not a salubrious residence, and some days before the occurrence of the case of cholera, had been advised by a physician to remove. The subject of disease in this place was Marian Foster, a reputable widow of about 45 years, with two children and by trade a tailoress. She was taken sick and died in the Rand House, where she had lived for some time past, as an assistant to Mrs Worcester, in the domestic offices of the family. Nine days before she sickened, a little boy in the family was taken in the night with vomiting and purging, and in the course of the ensuing week four or five others in the same house were attacked in a similar way, and some of them exhibited all the symptoms of common cholera morbus in a severe degree. They received medical advice, took medicine and recovered. It does not appear that Mrs Foster had any illness of this kind until the day of her death, although a circumstance presently to be mentioned authorizes a suspicion that she was suffering from diarrhœa, at least, the day before. We are informed that she was in attendance on those who were sick, and acted as nurse, especially to Mrs Worcester, who is represented as the

greatest sufferer among them. It is stated that Mrs Foster's attentions to the sick in the family were such as to interfere with her usual hours of rest, and to occasion considerable fatigue and exhaustion. In the meantime, she was not well herself, for on the eighth day previous to the fatal attack, she was seized with an ague in her face, which continued some time, and left her complaining of pain in her back, and general weakness. She took medicine on this account from Dr Seaton. Nevertheless, she was sufficiently well to be nursing Mrs Worcester on the Monday previous to her death. On the afternoon of that day, Miss Lord visited her, and assisted her in attending on Mrs Worcester. After having made some poultices or applications of that kind for Mrs W., they had some *cherry rum* mixed with water and sugar and both partook of the draught. In the course of the next day it was observed that Mrs Foster took the *cherry rum* unmixed, repeatedly — say three or four times — about a glass at a time. On these occasions, and by both the individuals, we presume this liquor was taken as a medicine, with a view either of preventing an attack of the disease which was prevailing in the family, or to relieve some slight symptoms of it which it is possible they actually experienced. There is not any evidence that the use of such drinks was habitual, or ever excessive with either of the individuals of whom we are speaking, and we notice their having taken them, in order that all the facts we could have, might be presented, and also because they give countenance to the supposition that Mrs Foster, if not the other sufferer, actually had some premonitory symptoms through the day, on Tuesday, and perhaps Monday, as the substance used is known to be a popular remedy for diarrhœa and like complaints.

On Tuesday Mrs Foster was abroad shopping both forenoon and afternoon. For dinner she eat *fried veal, potatoes and corn.* Returned home in the afternoon between five and six o'clock, and took tea with the family, or part of them. With her tea she eat *bread* and *butter, cake* and *pickled cucumbers.* Of the last named article she took one and a half, of about middling size. She was visited again by Miss L. as we have before stated, who came to the "Rand House" about 8 o'clock, and remained less than an hour. It appears, moreover, that during her absence from home in the afternoon, she had visited Miss L. at her sister's house in South-street-place, where she partook with the family of their evening meal, which consisted of *hashed corn, beef* and *potatoes,* with *cucumbers.*

On *Wednesday* morning Mrs Foster made no complaint before breakfast when she ate heartily of *beef steak,* and *bread* and *butter,* with tea. Soon afterwards diarrhœa came on, with faintness, and about half an hour previous to the attack, she took a wine-glass full of *cherry rum.* She was visited by a physician at 1 o'clock, and the sequel is known to the Board and the public.

These are all the important particulars which the committee have learned respecting the origin and immediate cause of these two unfortunate cases. During the continuance of the disease, in both instances, the patients were surrounded by their friends and relations, and were fearlessly and faithfully attended to the last. There is no doubt, moreover, that the medical treatment they received was both

active and judicious, and we have only to regret that it was not applied a few hours earlier than it was.

In neither of the cases can the committee find any evidence that the disease was communicated from any infected place, person or thing; for the subjects of it had not been out of the city further than Roxbury, and so far as can be learned, had not been exposed to persons coming from places where it prevailed.

There was, however, a rumor abroad, that Miss Lord had washed the clothes of an individual recently from New York, and although we presently found this to be absolutely false, yet we thought it best to trace out and report the circumstances in which it originated.

It appears that Mr Crockett, the husband of Miss Lord's sister, living in Short-street, was mate of the brig Atheneum, which sailed from New York for Boston, early in the present month.* She stopped at Stonington, Conn. and exchanged all her crew except Mr Crockett, and then came on to this place, where she remained in the harbor and at quarantine five or six days, got a clean bill of health, and went to sea on the 5th of August. The vessel arrived and departed in a clean and wholesome condition, with all the crew in perfect health.

While she remained in our harbor Mr Crockett was repeatedly at his house in Short street, and had some clothes washed, by his wife and another sister. Miss Lord did not assist them in this work, nor is it certain that she was in the house while the garments were there. If she was, the visits were transient. Mrs Foster was not in Mrs Crocket's house at, or near the time of her husband's visits.

The committee present the foregoing statement with great confidence, that the facts it contains may be relied on. They have refrained from any comment upon them, as they were directed to gather and report facts, and not opinions — having the former, the Board and the public will prefer to form the latter for themselves without any leading suggestions from the committee.

Which is respectfully submitted,

(Signed,) Henry Farnam,
Henry J. Oliver,
J. Binney,
Jabez Ellis,
Joshua B. Flint.

Health Office, August 21, 1832.

The remote cause of the disease seemed to have left us, or found no more materials for its exhibition, until nine days afterward, when another fatal case was reported by Dr Lewis, in a boy 10 years of age living at No. 3 Carver-street. This gentleman has been good enough to furnish us the following account of the case.

This young lad had retired to bed in apparently good health, on the evening of the 23d of August, and it is certain had not been effected with diarrhœa. He had not eaten of any fruits that day, and the

* Since the Report of the Committee was made, it has been ascertained that the vessel left N. Y. on the 21st of July. E.

whole family were restricted to the use of rice and potatoes as their only vegetables. In fact he had not exposed himself to sickness, by any kind of imprudence. At 2 A. M. was seized with vomiting and purging. The matter ejected from the stomach was but small in quantity, and was of a whitish color. The dejections were very copious and also of a light milky appearance, according to the description given by the parents; for after a short time both vomiting and purging ceased, and the medical attendant had no opportunity himself of seeing the quality of these discharges. The only remedy administered previous to the arrival of the physician was a small quantity of warm gin and peppermint. It was four hours and a half from the commencement of the attack, when Dr L. first saw the patient. Then the surface of the body was of a leaden color; the extremities bathed in cold, clammy perspiration; the fingers flexed and shrivelled; general coldness except in the regions of the thorax and abdomen, which were quite warm, especially about the epigastrium. Eyes shrunk in their orbits. Tongue slightly coated, white and cool. Thirst urgent. Pulse scarcely perceptible. Has not passed any urine. No cramps now nor at any subsequent period, but he had complained of pain in the legs some time previous. Answers questions when roused, but soon sinks into apathy. Hot brandy and water was given and two enemeta of hot water. Friction with mercurial ointment, camphor and cayenne was tried, sinapisms to the abdomen and feet, and persevering efforts were made to induce reaction until half past 11, when he expired. For about an hour previous to his death, there was observed to be a sinking in of the corneæ of both eyes, making distinct concavities, as if the chambers had partly lost their aqueous contents. Twenty minutes after death, there was a strong muscular action exhibited, which continued for some time, and even two hours and a half after, the muscles could be readily excited by stimulating them by pinching.

Antopsy at 1 P. M. The whole tract of the intestines was much corrugated, and contained an opaque whitish liquid, inodorous, in which appeared flakes of mucus. There was no redness or discoloration, the membrane being pale throughout. The glands of Peyer at the ileocœcal junction were perhaps somewhat high colored and swollen, but on the whole, the canal from æsophagus to anus presented a uniform whitish sodden appearance. The bladder was shrunk, but contained about a tea spoonful of urine.

There was no sufficient local cause to account for this attack in the situation or condition of the house or premises, unless it be found in the state of the cellar, which was indeed very wet, and had been noted as suspicious by the commissioners some time previous. The boy had not visited any places, supposed to be infected, nor had any communication with persons recently from such places.

After the lapse of five days, another case was recognised in Ann Street, a part of the city quite distant from that in which either of the others occurred. The patient in this instance, was a dissolute, and very intemperate woman thirty years of age. She occupied the upper story in an old house which, although situated in a low and thickly inhabited district, did

not present anything offensive, or particularly calculated to generate disease, in or about the premises. It did not appear that the patient had visited either of the places where the disease had previously existed, nor been exposed to any person or thing which could be thought capable of communicating it. We are indebted to Dr Wood, who attended her, for the materials of the following brief account of her case.

She became ill on the 29th of August, but in what manner is not known. Took for relief ℥ iss. of sulphate of magnesia, which presently moved her bowels smartly and continued to operate till the characteristic symptoms of cholera were manifested. Soon after the salts she eat two cucumbers. Vomiting and spasms supervened about 12 o'clock at night when the disease seemed to have been fully established. Dr Wood first saw her at 7 o'clock in the morning. She was then in collapse; extremities cold and leaden color; continual retchings; distressing cramps, and involuntary discharges of rice water matter; thirst extreme; tongue moist and cool; micturition totally suspended; abdomen hot and tender under pressure, particularly about epigastric region.

Capsicum baths as hot as could be tolerated were ordered for the feet; sinapisms to stomach, and bottles of hot water to body and extremities. Ten grains of calomel with one of opium, were administered, and followed every half hour by two grains of camphor, and one of opium. Injections of hot water were also used. Nevertheless the symptoms continued with trifling mitigation at one time, until a little after 12 o'clock, when she died.

The post mortem spasms, were unusually strong, and protracted. A hurried and imperfect examination of the body was made; but enough was noticed to confirm the obvious diagnosis from symptoms.

So stands our cholera account up to the 1st of September. The epidemic has been among us for a fortnight, and has numbered but four victims — an unprecedented immunity, equally inexplicable and encouraging to our citizens, and demanding of us all whenever it is referred to, an expression of most heartfelt gratitude to the Supreme Ruler who has both ordained the laws of the pestilence, and determined the favorable circumstances of our condition.

It is a subject of congratulation also that the first appearance of the disease in this city, has not given rise to any of those disgraceful altercations which have attended the announcement of the early cases, in some others, growing out of a mischievous attempt on the part of the health officers to conceal from the public the presence of the disease, or from a misunderstanding between these officers and the physicians, or from the operation of unworthy jealousies among the members of the medical profession themselves. From the two first named occasions of

controversy, we have been happily preserved by the honest and straight-forward proceedings of our Health Commissioners, and the readiness and unanimity with which the physicians have coöperated therein, so that both parties have secured the confidence of the public and a mutual good understanding.

This confidence will not be withdrawn from either party, unless it be forfeited by some indiscretion or offence of its own, or of some of its members. In view of the unhappy consequences of such a contingency in respect to the physicians, especially, it gives us pain to notice the remarks and contradictions which have been applied to the statements and opinions of gentlemen who have witnessed the cases that have happened here, by some *few* members of the profession who have had no personal experience in the matter whatever.

They have attempted to throw discredit and even ridicule on the reports of their professional brethren, — reports, made only for the purpose of giving their fellow-citizens correct information of the extent of the disease—by indirect counter-statements, and by cautious colloquial addresses to those whose interest tends to beguile them into a real or affected incredulity respecting the existence of cholera in the city. Confessedly destitute of personal experience in respect to a new species of disease which is alleged to be among us, they undertake to pronounce judgment on questions concerning it without evidence, or rather against it; to promulgate doctrines without data, and to arraign the discernment or honesty of those whose intelligence and honor they must be conscious of respecting.

Now such conduct, whether proceeding from juvenile conceit or the frowardness of senility, whether prompted by a perverse spirit of contradiction or the more unworthy sentiment of jealousy, is equally unmanly and reprehensible, and we shall consider it due to the cause of truth and candor, if such mischievous talk continue, to challenge by name those who are known to indulge in it to place upon paper, in a tangible and responsible form, the views and opinions respecting Cholera which they are so willing to advance in unprofessional circles, and amid the evanescent conversation and gossipry of their daily rounds. E.

Art. V. — Phrenology.

We are happy to inform the Medical Faculty, that Dr Spurzheim, the distinguished anatomist and phrenologist, has arrived in Boston, and proposes to spend some time, perhaps years, in the United States, for the purpose of making himself acquainted with the systems of instruction adopted by us, and of lecturing upon the science of phrenology, of which he and the late celebrated Dr Gall were the founders. It must be gratifying to our countrymen, that the institutions of learning which they take so much pride in supporting, will be examined and criticised by a foreigner who is every way qualified to judge of the principles on which such institutions should be based, and who will be able to appreciate their merits and defects, and whose reports of them will be read and accredited in every part of Europe. — It is fortunate for Dr Spurzheim that he visits a people whose minds are unsettled and unprejudiced in regard to the science of phrenology, which he proposes to teach during his sojourn in this country. If this science be founded on truth, and if it be so important as it is represented to be by its able and learned advocates — if it be, indeed, the only foundation on which can be erected a true system of philosophy, both moral and intellectual — and if it be the only correct basis on which can be established the true principles of mental instruction, and all social institutions, then it becomes the duty and interest of all to study and become acquainted with it. We understand that Dr Spurzheim comes to our country not as a teacher of phrenology only, but as a pupil. He wishes to study the peculiarities of our people as exhibited in all our political and social relations — to examine the physical conformation, and the moral and intellectual character of our Indians and negroes, in order to learn, if from the study of them he can derive any facts illustrative of the doctrines which he professes. His object is an arduous and a noble one — one which all men of science and searchers after truth will approve of, and all philanthropists will praise. — We trust that every aid will be offered to Dr Spurzheim by our medical brethren that can in any way favor his researches. — We had the pleasure of hearing the lecture which he lately delivered before the American Institute of Instruction, upon the subject of education, and were highly gratified with the novel and interesting views he

took of it,— and we shall wait with some impatience the arrival of the period when be will commence his course of lectures upon the principles and doctrines of his favorite science of phrenology.

Arrangements are already making among the physicians and scientific men of our city, to improve the opportunity now offered for witnessing his peculiarly satisfactory demonstrations of the brain. We have enjoyed an antipast of the treat we expect from these demonstrations, in a Lecture with which the doctor was kind enough to favor a small circle of medical gentlemen who happened to be in possession of the materials for dissection.

It rejoices us to have this opportunity of expressing our thanks for the instruction and entertainment we then received, and of assuring those who have any delight in the art or science of anatomy, that they will find an interest and satisfaction imparted to the study of the brain, by Dr S.'s dissections and physiological comments, which have hitherto been wanting in the common methods of investigating that most noble portion of the human structure.

The following is the syllabus of the popular course which the doctor purposes to give on his favorite system of intelectual philosophy.

Lect. I. — Introduction.—Anthropology is the proper study of man.—Its division.—Name, object and limits of phrenology.—Its consequences and importance.—The philosophy of the mental phenomena is little advanced.—Causes.—It must become a positive science, by studying the relations between mind and body.—Temperaments.—Viscera.

Lect. II. — The brain is the organ of the mind: of the feelings as well as of its intellect.—Objections.—Absolute size of the brain.—Plurality of the mental powers and organs.—Division of the head into four regions: occipital, lateral, frontal, and sincipital.—The size and form of the external head indicate the size and form of the brain and its parts.—The two tables of the skull are not parallel.—Possibility—difficulty and impossibility of knowing the size of the cerebral parts by the external appearance of the head.—Cause of the form and size of the head and brain.

Lect. III. — Means of specifying the mental phenomena.—Speculative philosophers are satisfied with general notions.—Means of pointing out the mental organs.—Anatomy.—Mutilations.—The size of the cerebral organs in all their dimensions is sufficient to determine the nature but not the degree of their functions.—Proceeding and nomenclature of Dr Gall.—Three inconveniences.—Rectification.—Phrenology is proved by repeated observations in individuals,— sexes,— nations,— criminals,— insane persons; — by comparative phrenology; — by anatomy, and by the natural language.

Lect. IV. — Order in which the organs are to be examined: according to their local situation or according to the nature of their functions.—Division and subdivision of the mental phenomena.—Generalities of the feelings.—The Creator has provided for every condition of man; 1. *For the immediate preservation of the individual* by alimentiveness, and destructiveness.

Lect. V. — 2. *For the immediate preservation of the species*, by amativeness and philoprogenitiveness. 3. For auxiliary means of preserving the individual and the species by inhabitiveness, combativeness; secretiveness.

Lect. VI. — Acquisitiveness; constructiveness, and cautiousness. 4. *For social relations*, by adhesiveness; approbativeness; self-esteem; and

Lect. VII. — By moral and religious feelings —Transition from animals to man.—Difference between moral and religious sentiments.—Both sorts are innate and their manifestations depend on the brain in the sincipital region of the head.—Objections made by religious people.—These feelings, like all others, are, in themselves, without understanding.—Benevolence; veneration, firmness.

Lect. VIII. — Marvellousness; hope; conscientiousness. 5. *For a pleasing condition of life* by ideality; mirthfulness and imitation.

Lect. IX. — 6. *For an intelligent state.*—Essence and subdivision of intellect.—External senses.—Frontal region.—Difficulty to judge of it.—Frontal sinus.—Mental philosophy newly modelled by phrenology.—Attention and pleasure explained.

Lect. X.—Perceptive faculties—Knowledge of external objects and their physical qualities, or individuality, configuration, size, weight and resistance, and coloring.

Lect. XI. — Perceptive faculties continued; memory explained; locality, order, calculation, applicable to various branches of knowledge, but no criterion of other talents.—Eventuality.—Time.—Tune.—Difference between the feeling, performance and science of music.

Lect. XII. — Language, logic, reflective faculties or reason: comparison and causality.—Imagination, judgment, association, mnemonics, affections and passions explained.

Lect. XIII. — Moral and religious considerations in connexion with phrenology.—Materialism.—Fatalism.—Necessity.—Liberty.—Responsibility.—Natural morality.

Lect. XIV. — Modifications of the mental tendencies. Difficulty of judging.—Necessity of mutual forbearance.

Lect. XV. — Characters.—Talents.—Natural sympathy and antipathy or harmonious and disharmonious dispositions.—Insanity, a bodily disease; moral causes.—Periodicity of nervous irritability.

Lect. XVI. — Phrenology in connexion with physiognomy.—Principles of the natural language.

Lect. XVII. — On Education. Definition of this term.—Perfectibility of man.—Conditions which increase or diminish the *innate* faculties.

Lect. XVIII. — Education continued.—Direction of the innate faculties, according to the natural laws, physical, moral and intellectual.—Variety of motives.—General and professional education.—Criminal legislation.—Happiness, individual and general.—Conditions.—Conclusion.

Art. VII. — Jackson's Cases of Cholera.

Cases of Cholera collected at Paris, in the Month of April, 1832, *in the Wards of MM. Andral and Louis, at the Hospital la Pitié.* By James Jackson, Jr.—Boston: Carter, Hendee & Co., 1832.

We are pleased with Mr Jackson's book, in the first place, because we like to hear from our young friends abroad, that

their industry is creditable to the name of American Medical Student, which has always stood high in France and England, and secondly, because we like to see, presented by a medical student, what the younger part of the profession have the best opportunity to perform, a specimen of neat and exact medical reporting.

Mr Jackson was pursuing his studies in Paris at a period of great interest to the medical student, — that of the memorable appearance of the Cholera in the wards of the hospitals of that city, last April. His assiduity in attendance upon the patients at the Hospital de la Pitié, procured him the favorable notice of MM. Andral and Louis, men distinguished for their zeal in the cultivation of medical science and for their exactness and liberality in teaching it.

The work is put to press by the author's father, the distinguished professor of the theory and practice of physic in Harvard University, and is prefaced by a note detailing the circumstances of its publication and adding some valuable remarks on some of the plans of treatment which have been promulgated for Cholera. In the opinion of Professor Jackson the practice adopted by the English physicians in India, presents more claims to the confidence of American practitioners than that of any of those who have combatted the disease in Europe or this country. The late report of the Massachusetts Medical Society gives a concise account of this treatment and of the evidence upon which its claims to confidence is rested.

The work before us is an account of sixty cases of Cholera. These are divided into two classes, those in which there was no reaction, and which of course were all fatal, thirty in number, and those in which reaction took place at an earlier or later period and of which nine were fatal and the remaining twenty-one recovered. And it is remarkable that recoveries only took place in those cases in which there was full reaction, that is, preternaturally excited pulse and heat of the skin.

Mr Jackson's mode of investigating the symptoms and pathological phenomena is by what has been called the numerical system, and is attributed to M. Louis as its author or reviver. It consists in tabular views in which are *counted* the number of cases presenting a particular symptom or morbid appearance, and thereby determining the essential characteristics of the disease. Of the symptomatology nothing struck us more remarkable than the fact that diarrhœa was nearly a constant symptom in the access of the disease and almost the *only one* which was

so. It existed in fiftyfour cases, while vomiting was present in only seven. We read so much of those cases in which collapse takes place without sensible evacuations, that we had naturally expected a proportion of those in which death took place from the impression of the morbific cause upon the vital organs, without being marked by disturbance of the digestive organs. But it is to be remarked, that such cases are not usually the ones which are brought to the wards of a public hospital. The advocates of the numerical system, seem to be highly enamored of its advantages; and it certainly presents facilities for condensing observations upon the natural history of diseases. It certainly is better than trusting to those "general impressions" to which the author so pointedly alludes in his closing remarks. It cannot, however, be claimed as a new invention. It is the eclectic method of study and has been applied by some of the English reporters, and may be regarded as the foundation of the science of phrenology.

The pathological appearances of the first class of cases are minutely detailed, and correspond to the accounts which have before been presented to us. The mucous membrane of some part of the alimentary canal, was, with a single exception, constantly found exhibiting a change of structure. We would call the attention of our readers to the greater minuteness of the investigations of the mucous membrane of the alimentary canal in French pathological inquiries, than with us. This can be done with very great ease. A pair of long-bladed scissors, with one blade half an inch shorter than the other, is a most convenient instrument for slitting open the alimentary tube. The function of this membrane is performed not only by the vessels which terminate in its villi, but by the glands or follicles which abound in the interstices between its valvulæ. These glands in the duodenum and superior portion of the small intestines, are named from their distinct arrangement, glandulæ solitariæ, and bear the name of Brunner, &c; in the inferior portion and colon they are arranged in oblong clusters and denominated the glandular plexus of Peyer. The office of these bodies is certainly not well understood, but their changes in a state of disease are sufficiently remarkable. The speculations of some of our American pathologists upon Cholera infantum are founded upon these changes. There is probably nothing which has done so much for pathology during the present century as the attention which has been directed by English and French observers to the morbid appearances of the alimentary tube.

Of the second class of cases it is worthy of remark that in nearly all the fatal ones, there was found to exist the marks of pulmonic inflammation, and in several of the recoveries, this inflammation was successfully combated. This local affection in the cases accompanied with reaction, is a little different from what has been found to take place most frequently in England and this country. The determination of blood has usually been to the cerebral rather than the respiratory organs. The typhoid symptoms have attracted particular attention in the whole history of the disease from Petersburgh to London.

On the treatment, the author's remarks are brief. The result of practice more energetic than the French practice usually is, is anything but flattering, in the severe cases. The author refers on the subject of treatment, to an expected work of Dr Smith of North Carolina, who had opportunities of observing the disease during its prevalence at Hospital Necker. We believe Dr Smith's work is published, but has not yet reached us. Friction with a flesh-brush, as an application both palliative and remedial, is highly commended, and much stress is laid upon the early employment of venesection in cases of topical engorgement and inflammation after reaction.

There are several observations which are called to mind by this work, and by the note appended, upon the treatment by saline injections, which our straitened limits compel us to omit. The work was not received till our present number was nearly completed, but we preferred giving this hasty notice to any delay in announcing a work which is highly useful to be read by every practitioner who expects to meet with Cholera.

We will not overlay this highly creditable beginning of our young friend with injudicious praise. We have some of the fears expressed by the editor, whose paternal feelings will peep out from under the professor's robe, that we shall be suspected of partiality. We will only venture to use the language of one of Sir Walter's critics, "Yon's no that bad." E.

☞We have to acknowledge the receipt of a valuable manuscript, containing observations on Cholera as it appeared in Vienna, by our enterprising young countryman, Charles F. Jackson, M. D. It came to us too late for insertion in the present number, but will appear in the next: in the mean time, our respected friend, his former medical instructer, will accept our thanks for his goodness in transmitting it to us. E.

COLLECTANEA.

Cholera in Massachusetts.

That there is a choleraic influence prevalent in all the Eastern part of Massachusetts cannot be doubted. We hear from all quarters, of the prevalence of diarrhœa and the symptoms which have been denominated Cholerine or the premonitory symptoms of the malady which has been epidemic in New York. Our medical friends in the country, almost without an exception, state that the principal part of the new cases of sickness, to which they have been called for the last two months, consists of diarrhœa and common cholera. A very large proportion of the population have been affected by these diseases which have seldom been so severe as to endanger life, and have readily yielded to alternate doses of laxatives and opiates. There have been, however, some cases of a more severe character, exhibiting unequivocal marks of their identity with those of spasmodic cholera. The disease which appeared in the State Prison at Charlestown, and at the House of Industry in South Boston, and of which we hope to be able to give a full account in a future number, although hardly equalling in severity the worst form of Cholera, has been regarded by the medical observers of it as a disease emanating from the same causes as those which produce the more violent forms of the disease. In this respect, the present conforms to the laws of other epidemic diseases. In New York during the last two months scarcely an individual resident in the city has escaped a visitation of bowel complaint in a greater or less degree, while the cases which put on the marked characteristics of Cholera were comparatively few. So in epidemic scarlatina, the cases attended with efflorescence and the complete phenomena of the disease, are rare compared with the inflammatory sore throat, and febrile rashes which mark a partial development of the disease. The same is said to be true of epidemic small pox.

There is one practical inference to be deduced from this view of the subject which is too consolatory not to make us earnestly wish it to be true, at least. It is this, that we really have been visited by the epidemic in a very light form, and that being now evidently on its decline we may hope to be exempted for the present from the more dreaded invasion of the genuine Cholera.

Among the severer instances of the disease, the following, which

have been attentively noted by Dr Nichols of Danvers, occurring in Andover and Haverhill, and by Dr Brown of Lynn, occurring in that town, will furnish additional proof of the endemic origin of the disease. E.

Andover. — The following communication from Dr Nichols, of Danvers, who visited Andover on Tuesday, Aug. 10, contains the particulars of the cases which had occurred there, and of the circumstances under which they took place: —

At the request of the Messrs Suttons, I have this day visited the sick at their factory in Andover, where from Drs Kittredge, Underwood and Huse a full history was obtained of all the cases which have excited so much anxiety in the community. The symptoms in Mrs Hardy's case were decidedly those of malignant cholera, agreeing in most particulars with many which I saw in N. York. She was taken on Saturday with nausea, &c, after eating with her breakfast a few stale clams and cucumbers. She continued about her work till dinner. Went to bed. At 2 o'clock P. M. taken with vomiting, purging and spasms. At 3 Dr Kittredge found her in a state of collapse; cold and pulseless; vomiting and dejecting phlegmy watery matter only. By the application of external heat, &c, the circulation of the blood and warmth were restored in about three hours. She continued in a warm sweat, thirsty but apparently doing well, for twelve hours, when she sunk into a stupid, comatose state, with slight spasms of the muscles of the limbs, which continued till Monday morning, when she died, aged 60, an industrious and temperate woman.

Two other women have since been attacked with vomiting and purging bilious matter, and spasms, without much coldness or collapse. One of these, the severest case, remains feverish, and the other is convalescent. Four other milder cases, without spasms, have occurred at the factory; all considered convalescent. Two other cases occurred about a mile distant; all females, except a son of Mrs Hardy.

These cases cannot be accounted for on the theory of contagion; but they are amply accounted for on the supposition that cholera may originate from a choleric influence in the atmosphere, and from malaria, or the exhalations from rotting vegetable matter. The place is on the bank of the Merrimack, near the mouth of Shawsheen river — lower than the mill pond, and a few feet above the stream below the factory. — So far from causing any additional fear from cholera, these cases seem to me calculated to allay in some measure that which already exists among us. They seem to indicate a something in the season which tends to produce the disease, of which a comparatively few cases only prove malignant. The mild cases of cholera

morbus prevalent in all our towns, may arise from the same cause, and bear the same relation to malignant cholera that mild cases of scarlet fever or dysentery do to malignant cases of the same diseases. ANDREW NICHOLS.

P. S. The exciting cause, and that which probably aggravated and rendered malignant the case of Mrs Hardy, was the error in diet above mentioned. None of the other patients ate of the clams — nor, as we could learn, had they made use of any unusual food — and the exciting cause must be sought in something else. A. N.

A case of Malignant Cholera, reported by DR BROWN, of Lynn.

On the 21st of August, at eleven o'clock in the evening, I was called in great haste to see Mrs H——— of this town, a nursing mother aged thirtysix, not originally of a sickly constitution, but somewhat enfeebled by frequent childbearing, and subject to periodical or sick headache. An attack of this disorder she had had the day previous, on account of which she took an emetic; but from the cephalgia and the effects of the medicine she had so far recovered as to partake of supper, between five and six o'clock, in quantity nearly as usual, and was free from diarrhœa, or other premonitory symptoms, till the early part of the evening on which I was called. The supper consisted of bread and butter, dried salt fish, and tea. After partaking of this, she felt unusually thirsty, and drank freely of cold water; and soon complained of a sense of coldness in the abdomen, nausea at the stomach, with severe pain in the epigastric and abdominal regions. Finding herself thus indisposed, she went to bed about nine o'clock, and was suddenly seized with vomiting and diarrhœa. The discharges occurred in rapid succession, and so great prostration ensued, that, on rising from bed at the call of nature for the fifth time, she fainted in the arms of her husband. From this she had just recovered when I arrived; and again with returning animation, all her distressing symptoms reappeared with alarming aggravation. The pulse was small and feeble, the extremities cold, the eye sunken and languid, except when agitated and strained by the paroxysms of distress. The posture, which in this disease is worthy of remark, instead of assuming the bending or doubling form usual in ordinary affections of the bowels, was entirely the reverse; the arms were thrown abroad over the bed, and all parts of the body were with difficulty kept sufficiently covered. The alvine discharges were copious, and of the color and consistence of thin gruel, whey, or serum. Her ejections from the stomach, which at this time were not great in quantity, consisted of a thin fluid mixed with small pieces of food. Now, and throughout the prevalence of

the severe symptoms, the patient exhibited a craving and insatiable thirst.

I immediately corded the arm, and drew from a large orifice about twelve ounces of dark, thick, grumous blood, when the flow ceased. I also gave two teaspoonfuls of paregoric, mixed with camphorated spirits and essence of peppermint in hot water; ordered constant frictions with heated flannels to the extremities, a large, strong, and hot mustard poultice to the stomach and abdomen; and soon after exhibited a grain pill of opium, and advised a frequent repetition of hot cordial drinks. Though the vomiting and purging were partially checked by these measures, yet the situation of the patient became more critical, and she now began to be affected with spasms in many parts of the body, which every moment grew more severe. I therefore called in consultation my friend Dr Hazeltine, who cordially approved of the course I had adopted, and we fully agree in opinion, that the greatest, if not the only chance of safety for our patient consisted in the vigorous application of all the means heretofore used for producing heat in the surface and extremities, in the continuation of hot liquors and active stimulants, and in the liberal administration of opium and calomel, to allay the spasms and restore the secretions. Two pills, each consisting of seven grains of calomel and one of opium, were therefore immediately given, and all the other means were ordered to be applied with increased activity.

It was now past midnight; and the situation of the patient will best be understood by an extract from the notes of my able and experienced coadjutor, describing the case as it appeared on his arrival: "Her surface was cold, and particularly the extremities; her nausea and efforts to vomit, frequent; her cramps or spasms almost constant, and very distressing; her pulse irregular, intermitting, and several times altogether imperceptible; her groans were the most doleful and clamorous that ever I heard; the contortions of her body and limbs were the most violent that ever I saw; her head was drawn backward, her mouth was open, and her tongue somewhat protruded, her eyes rolling and distorted, and her countenance the most ghastly. Nothing in this description is exaggerated; and nothing of the severity of the case seemed attributable to fear. For the patient uttered not one expression of apprehension or alarm respecting the nature or the issue of her disease. The attack and progress of this disease, till the violence of the symptoms began in some measure to yield to the treatment pursued, were like a whirlwind or a hurricane." To this vivid description of the sufferings of the patient, I can add little more than my testimony to its accuracy. The mind, so far as the state of the bodily powers could

allow it to act, appeared to be sane. But the whole aspect of the case bespoke unutterable distress, of which the pitious moanings of the sufferer were a most peculiar and expressive index. Language cannot adequately describe it. To be realized it must be witnessed, and, once seen, it could never be mistaken or forgot.

In the further treatment of the case, the pills of calomel and opium were repeated at short intervals for three hours, when ten had been taken; making seventy grains of calomel and ten of opium in this form. Heat was constantly applied to the surface and extremities by means of hot bricks wrapped in flannel. About four teasponfuls of laudanum were exhibited at intervals during the giving of the pills. About half a pint of brandy, in form of hot sling, was given during the active treatment. The dejections were early and effectully checked, either by the venesection, or by the other means first employed; at three o'clock all the other symptoms were much alleviated; a partial drunken delirium had been produced; and to this a universal reaction of the system succeeded; our patient was considered to be in a hopeful way; and tranquillity was in a good degree restored; to complete and secure these desired results, it was thought advisable to continue the opiates; and five one-grain pills of opium were given, at intervals, between three and five o'clock; at which time we left the patient to the care of the attendants, with directions to give a teaspoonful of laudanum every half hour, in case there should be any return of spasms, or great restlessness should appear. At nine o'clock we visited her again. The course of treatment had produced a high degree of febrile excitement; the vomiting had not recurred; and she had experienced very few and trifling cramps. After this the patient continued slowly to recover, under the frequent use of opium, camphorated spirit, wine sangaree, brandy sling, &c, and of a sudorific, wine of ipecac or a solution of tartrite of antimony. Dejections were cautiously excited, because it was found that upon the recurrence of these much depression ensued. Gentle aperients and enemeta were however required and used during her convalescence.

It will be perceived that, in the case above recited, not all the phenomena of the Asiatic Cholera in its worst form were developed; but this we believe to be, merely because the course of the disease was arrested, by the remedies, before the more hopeless and deathlike stage of collapse arrived. This instance also goes to prove that the disease may arise spontaneously where there are causes calculated to produce it; for this patient had had no communication with any other source of contagion, than her own uncleanly dwelling, situated on moist ground, and having a wet and filthy cellar. There must also have been some predisposition in the individual, for no other member of the family,

nor any of the attendants on the sick, or the persons employed to cleanse the premises, have yet taken the disease.

Lynn, Sept. 3d, 1832.

DANVERS, MONDAY EVENING, AUG. 27, 1832.

Haverhill. — We are indebted to the continued kindness of Dr Nichols for the subjoined statement of the Haverhill Cholera case.

MESSRS EDITORS, — I received an early call this morning to Haverhill to examine the case of a gentleman sick of Malignant Cholera — The particulars, as I learned them from Drs Longly and Whiting, follow. Mr Wilson Chamberlain, of New York city, which place he left about the first week in July, on account of ill health, he having had a long fever in the spring, from the effects of which he had not entirely recovered, when attacked in June with diarrhœa, which has effected him ever since, on Saturday made a journey to Lowell and back again; during which his complaint was much aggravated, and in the evening put on some alarming symptoms. Dr Longley was called in and a judicious treatment* instantly commenced and faithfully persevered in, up to the present time, by which means, probably, spasms have been prevented, the warmth of the body preserved, a collapse prevented, vomiting restrained, and the rice-water-like evacuations from the bowels in a great measure suppressed.

We found him this morning with the secretions surpressed, speaking with the peculiar choleric voice, exhibiting a strongly marked choleric face and hands, leaden colored and corrugated, complaining of a sensation in head like that which arises from the ears being filled with water, — in fine exhibiting those striking appearances of malignant cholera which having been once seen can never be forgotten. We are happy, however, to add that these symptoms are somewhat mitigated since yesterday, and hopes are entertained of his recovery.

The house in which he has resided for six weeks is situated in the lowest part of the street on the bank of the Merrimack river, near a Morocco Factory. In this street there are few or no trees — between it and the river little or no vegetation. — In past years the inhabitants of this house have suffered severely from Autumnal sickness. Twelve or thirteen years ago three persons died in it of fever — eight years ago one of dysentery — and the present season the cellar has not, as we could learn been thoroughly cleansed.

* Of the treatment of this case the application of external heat and continued friction with the Cayenne, Camphorated Mercurial ointment formed the most important part.

I have been thus particular in describing the location of this case of cholera because it seems to me highly important that such particulars concerning the first cases which occur in towns should be generally known. From them much may be learned concerning the true character of the disease and the best means of escaping it. ANDREW NICHOLS.

[From the Medico Chirurgical Review.]

Letter on Cholera, by Baron Dupuytren. — The history of this fatal malady is deficient chiefly in very exact information of the true seat of the evil, and of the nature of the organic lesions produced in the intimate texture of our bodies. Some authors have supposed that the brain is the original seat of the disease; others have referred it to the spinal marrow; or to the semilunar ganglia and solar plexus; or to the heart. It appears to me that these opinions are little probable; but it would be well to verify them by very careful dissection, and by a minute examination of any changes found in these viscera.

The seat and character of the pains, and the nature and profusion of the discharges, lead the mind to suppose that the stomach and bowels must be the organs which primarily and principally suffer. Hitherto, however, it must be confessed, no very constant, or uniform morbid appearances have been detected; but to account for this, it is well to keep in mind that most of the dissections have been only of such patients as have very rapidly been carried off: to obtain satisfactory information, we must direct our examinations especially to the bodies of those who have resisted the disease for some time, and in which, therefore, it is reasonable to suppose that more distinct and obvious effects have been produced. Moreover it appears to me that the dissections have seldom been performed with a sufficiently inquisitive minuteness and accuracy.

As one of the most striking symptoms of cholera is the immense quantity of a thin, watery and almost insipid fluid discharged by vomiting and purging, is it not reasonable to direct our researches in an especial manner to those viscera which furnish this fluid? Now these viscera must be either the pancreas, the liver, or the alimentary canal; and if this last, then it must be that part of the tissue which supplies its peculiar secretions, viz. the small follicles (or glands of Peyer and Brunner) which are situated in the substance of the mucous membrane, and which are found clustered in certain parts of the bowels, known to all anatomists. The quality of the evacuations assures us that it cannot be the liver, and we are therefore led to believe that the

offending organ must be either the pancreas or the secretory apparatus of the intestines. I am persuaded that a very attentive inspection of these follicles by the microscope will reveal in their cavity, walls, or surrounding substance, in their development, in the morbid changes of their texture and of their secretions, the seat and perhaps even the nature of cholera.

This is not mere conjecture: I have frequently examined the bodies of persons who have died of sporadic cholera, and I have uniformly found the glands of Peyer and Brunner exceedingly enlarged, and yet without any very distinct traces of inflammation. I do not believe that the epidemic differs so materially from the occasional cholera as to be attended with any marked difference in the seat and nature of the disease.

I would say therefore that the cholera has its seat in the alimentary canal in general; and more particularly in the follicles of the stomach and small intestines; that it essentially consists in a "*secretory irritation*" of these organs; that this gives rise to the dreadful pains of the bowels, and to the profuse watery evacuations; that the symptoms of disturbance in the functions of the brain, spinal marrow, particular nerves and the muscles to which they are distributed; of the heart and lungs, &c, are to be considered only as the sympathetic effects of the original disease; effects quite analogous to what we witness in malignant dysenteries which are attended with severe pains and excessive purging.

If these ideas be confirmed by dissection, it would follow, that the preventive treatment of cholera should consist, in guarding the surface of the body most strictly from the impression of cold and of moisture, by the use of flannel worn next to the skin; and in avoiding whatever tends to excite, or irritate the stomach and bowels, such as acrid, heating food and drink. The curative measures, when the disease once manifests itself, which are likely to be most useful, are leeches applied to the pained parts of the belly; composing drinks, (such as a decoction of poppy heads sweetened with syrup of gum, and administered frequently) and the exhibition of plumbi acetas, either in the form of pills, or dissolved in the decoction. I may remark that the preparations of opium are not so efficacious as the decoction of the poppy heads. The former have, in my practice, repeatedly failed, where the latter succeeded to my wish; and the acetate of lead, a sedative "par excellence" in all cases of inflammation attended with copious discharges, has been productive of better effects in sporadic cholera, when exhibited in a state of solution, than formed into pills.

Besides these means, the patient ought to be enveloped in warm blankets; frictions most perseveringly employed, and every now and then the steam of water introduced under the bed-clothes, so

as to form a hot atmosphere round the body. We must carefully avoid, at least in the commencement, all purgatives, emetics, and irritants, which have been so freely and perniciously ordered by many, for they cannot fail to aggravate the irritation which is the essential character of the malady, and thus to hasten its fatal termination.

P. S. The dose of the acetate of lead may vary from 10 to 25 grains in the course of a day ; it will be best given by ordering 3, 4, or 5 grains in a cup of the decoction, every hour or so, until the patient experiences some relief of suffering, and the evacuations are diminished. This mode of treatment has succeeded admirably in several cases of most severe sporadic cholera, which have occurred in my practice.

Appended to the preceding letter, are some critical remarks by the Editor of the Revue Medicale. He finds much fault with the Baron for presuming to say that the dissections have not hitherto been conducted with sufficient minuteness and skill, and reminds him of the swarm of young medical men who have left the anatomical schools of France to visit those countries in which the epidemic was raging.

He tells him that he is mistaken in asserting that profuse evacuations are an esssential symptom of the cholera; death may take place, even where there has been trifling vomiting and purging. Again, his opinion as to the identity of the nature and seat of ordinary and of epidemic cholera, cannot be strictly correct, even upon his own premises ; for surely the Professor will not deny that the liver, which may be put " hors de question " in the consideration of the latter, is intimately and immediately involved in the former, as is proved by the bilious dejection ?

It appears very strange that the Professor has omitted any allusion to the exhalant vessels of the intestines, and directed his suspicions solely to the mucous follicles on their surface. Are not they much more capable of producing the liquid stools than the small glands, which are irregularly scattered, and in some places appear almost altogether deficient ?

The circumstance of M. Dupuytren having found the glandulæ Peyeri et Brunneri enlarged in several cases of sporadic cholera, cannot be considered as of much avail ; for so common is this morbid appearance, in some continued fevers, that a distinguished physician has proposed to designate these by the name of " dothinenterites," from the Greek word "δοθιην," furunculus, and "εντερά," intestina.

For these reasons, we think that the distinguished author has been led into error, by assuming the *effects* of the disease for the *causes ;* as well might we say that the enlargement of the spleen was the cause of intermittent fevers, because such a morbid state

is almost invariably found in patients who *have died of these.*— *Revue Médicale.*

Letter on Cholera, by Dr Ochel of Petersburg. — By far the greater number of medical men in St Petersburg are of opinion that this epidemic is *not contagious*, but that it is propagated by aerial miasmata and exhalations from the earth. The sudden appearance of the pestilence, and the rapidity with which it diffuses itself whenever it appears, strongly corroborate this idea. Moreover, many who escape the disease in its violent and concentrated form, suffer from *choleric* or *choleroid* attacks which are to be viewed only as diminutives of the great original; thereby distinctly proving that its severity and fatality are in proportion as the patients are predisposed to be affected by the influence of the atmosphere.

Dr Ochel contends that the proximate cause of the disease is a paralysis of the organ of circulation. His remarks apply chiefly to the third stage, or what has been called the "stadium reactionis," which varies exceedingly in its character in different individuals. In many it commenced with delirium, which was speedily followed by coma, and numerous patients died in this state; in others there were neither delirium, nor coma, but inflammatory attacks of different viscera, sometimes of the liver, and not unfrequently of the parotid gland; in a third class he observed, fevers of various types, gastric, bilious, inflammatory, typhoid, or even intermittent. The treatment which he found by far the most effectual, consisted in giving repeated doses of common sea-salt in tepid water, till it produced bilious vomitings and stools. Out of a great number of cases, he selected 15 of the most aggravated; in each of these he gave the solution of salt, and in every case bile was copiously evacuated in less than an hour: 13 were saved and two died. When the bile passed downwards, either at the time, or on the morrow, he observed that the patients were generally cured in three or four days; when it did not, they were subject to relapse of particular symptoms, as watery vomitings, cold extremities, &c, &c; but these threatenings vanished as soon as the bile was evacuated by a few spoonfuls of tincture of rhubarb. Some of the medical men tried emetic doses of ipecacuan and tartrate of antimony, and found that nearly the same success was obtained, provided a sufficient quantity of bile was evacuated. Even the lower orders in Russia, who refused to apply for medical assistance, resorted to large quantities of oil and tepid milk to excite vomiting, and frequently with good effects.

From these facts, Dr Ochel infers that the correct mode of treating cholera is to evacuate the bile as quickly as possible

and that whatever tends to check the vomiting and purging, before this effect is produced, is decidedly pernicious; for though death may be thus prevented at the onset of the disease, the foundation is almost always laid for the secondary disease, or "stadium reactionis," which never takes place when the bile has been freely discharged in the first stage. Dissection of rapidly fatal cases adds confirmation to this view of the subject; the gall-bladder is found distended with bile, and the ducts closely contracted. We must carefully distinguish the morbid appearances in such as have died in the early stage, from those which we observe after the secondary disease, under any of its different modifications, has commenced.

Many of Dr Ochel's colleagues observed that the best preservative against an attack of the epidemic was a powerful emetic. As the disease began to subside in Russia it was noticed that numerous cases of bilious vomitings and purgings occurred.

Many who had been cured of cholera by the sedative and astringent treatment, recovered exceedingly slowly, and for several weeks after they had been pronounced well, suffered from vertigo, spasms, &c, &c; but these symptoms quickly disappeared, when the discharge of bile was promoted.—*Revue Médicale.*

Letter on Cholera, by Professor Delpech. — An attentive examination of the bodies of those who have died of cholera, clearly demonstrates that its essential or proximate cause is an active and disorganising inflammation of the solar plexus, semilunar ganglia, and renal plexuses, which constitute the great central point of the ganglionic system; and this inflammation is sometimes propagated to the pneumo-gastric nerves, to the pneumo-cardiac plexus, and even to the medulla oblongata. Numerous other pathological appearances have been remarked; but none of these is uniform; and many are evidently the result of pernicious treatment. The chain of symptoms most beautifully corroborates this hypothesis; for all the organs which are most involved, are under the influence and control of the ganglionic nerves; namely, the liver, the circulating and respiratory apparatuses, the abdominal viscera, including the kidneys and bladder. A curious fact is, that the vomitings and purgings consist of the serum of the blood, which being thus deprived of its watery portion becomes thicker and thicker: — now this change cannot be conceived to take place without an important lesion of the trisplanchnic nerve. The nature of this lesion we have explained to be an inflammation, and we should therefore infer that an antiphlogistic treatment must be most successful; practice has confirmed the truth of the conjecture; bleeding is the sheet-anchor of safety, when the severe symptoms have set in; the earlier stages may be combated with opium, warm baths, and strict

abstinence. When collapse has taken place, we must employ stimulants, by giving them both inwardly and by rubbing them on the skin, or, what is much better, by injecting a diffusible one, such as camphor, into a vein, with the view of rousing the circulation, to enable us to draw more blood.—*Journ. Hebdom.*

Mr Lizars' Letter on Cholera.—To those acquainted with the professional zeal and professional acquirements of Mr Lizars, any mention of them would be superfluous, and we need not therefore say that the letter before us is both instructive in a practical, and interesting in a physiological point of view. The letter also derives an additional degree of interest, from its having been the occasion of a personal attack on Mr Lizars by some individuals in the Edinburgh Board of Health. An attack so ungentlemanly, so uncalled for, has seldom been witnessed of late years, and the general feeling of indignation which it aroused will prove we hope an ample guarantee against the repetition of similar outrages from authority on common decency and common sense. Mr Lizars may be persuaded that however galling such a scene may be to his feelings as a private individual, he has gained, not lost, in his public character. The spirit which could dictate in these days wanton insult on account of a professional opinion, is a lineal descendant of that which in darker ages could raise the Smithfield fire for religion, and persecute Galileo for science.

The first part of the paper contains a letter to Mr Lizars from the able Professor of Montpellier, M. Delpech. Our readers are probably aware that M. Delpech conceives the semilunar ganglia, and abdominal plexus to be the principal and essential seat of the morbid action of cholera, and that he has found his ideas confirmed by numerous dissections. To establish this point is the main object of the present letter. We have already dedicated so much space to cholera, that we cannot enter into it again. Mr Lizars is an anticontagionist, and portrays in a manner equally argumentative and eloquent the absurdities into which contagion has led both Boards and individuals. That doctrine is now so generally abandoned that we need not discuss it here. Yet we cannot refrain from mentioning one instance of the cruel folly to which it has given birth in Scotland. While cholera was at its acmé at Fisherrow, *and when the most unrestricted intercourse by land and by foot passengers was allowed*, a solitary boat with two men from the place touched at Leith harbor. The poor fishermen had no sooner landed than they were hurried away under guidance of a guard-boat to perform quarantine at St Margaret's Hope! We can scarcely believe that men in the possession of their senses could be guilty of such absurd injustice. We will not say with Fouché that such conduct is "worse than a

crime — it is a blunder;" but assuredly it is both a crime and a blunder. As a matter of rational argument it cannot admit of defence, but when the injurious consequences upon a population already pauperized and ruined are considered, we shudder at the levity of men who can rashly deal abroad destruction, with such indifference and indiscretion. The following quotation is the only one we shall make from Mr Lizar's pamphlet. It is obviously insusceptible of abbreviation, and yet contains a very valuable digest of the morbid anatomy of cholera. It is a "summary of twenty dissections."

"BRAIN.

Of this number twelve had this organ examined, and, in all, the arteries and veins of the integuments and muscles covering the cranium were distended with the dark blood, which, in some flowed like tar.

In ten, the blood-vessels of the dura mater were turgid with this blood; and in three, there were fibrinous coagula.

In seven, there was serous effusion under the arachnoid membrane.

In four, the pia mater was congested with blood-vessels.

In seven, the cerebrum was highly vascular; and in one, slightly softened.

In seven, the cerebellum was very vascular; and in three, its substance was slightly softened.

SPINE EXAMINED IN TEN.

In six, serous effusion between the ca-vertebralis and arachnoid membrane, and, in one of these, the fluid was bloody.

In two, serous effusion between arachnoid and pia mater.

In six, blood-vessels of spinal chord highly injected with the dark blood; and one with evidence of inflammation between dorsal and lumbar regions.

In six, the spinal or rachidian veins turgid with dark blood.

GANGLIONIC SYSTEM EXAMINED IN SEVENTEEN.

In ten, the neurilema of pneumogastric nerves was injected with blood-vessels; in one, the nerve was enlarged; in another, it was thickened; and in a third, the neurilema was inflamed with ecchymosed patches.

In six, the neurilema of splanchnic nerves was vascular; in two, the ganglia at their origins were vividly injected; and one ganglion was ecchymosed.

In sixteen, one or both of the semilunar ganglia were vascular; in one, it was inflamed; in three, it was enlarged and infiltrated with blood or serum; and in two, softened.

In eight, the solar plexus highly vascular throughout; in three, the ganglia and nerves enlarged, and one infiltrated.

In four, the renal plexus was very vascular.

In four, the œsophageal plexuses were vascular.

In one, the recurrent of the pneumogastric nerve was vascular.

In five, the cardiac plexus was enlarged, and very vascular.

THORAX.

Heart.—In three, the heart was flabby and pale; in two, collapsed; and many of them had the left ventricle so contracted and firm, as to contain only a drachm of blood. In thirteen, the right side was full of the dark gory blood, part of which was generally in the state of a fibrinous coagulum.

In three, the left side was full of the same blood with coagula.

In three, the right auricle full of dark blood and coagula.

In six, the left auricle full of dark blood and coagula.

In four, left ventricle was moderately filled with blood and coagula, and one affected with softening: in two, coagulum extended into aorta.

In five, right ventricle full of blood and coagula. In one, coagulum extended into pulmonary artery. In two, the parietes were softened.

Pericardium.—In one, this sac was distended with gas; in two it was dry, like paper, and vascular; and, in a third dry, vascular, and diaphanous. In four it was vascular. In all, the coronary vessels more or less injected with dark blood.

Venæ Cavæ.—In all, more or less of the dark blood was found.

Pulmonary Veins.—In six, these veins were turgid with the dark blood.

Lungs.—In four, these organs were congested with the dark blood.

Pulmonary Artery.—In one, a large coagulum, which extended into its two large branches. In three, it was full of the dark blood; and, in three others, the vasa vasorum were highly injected.

Pleura.—In five, highly injected; and in two, there was effusion of lymph.

Aorta.—In all, it contained more or less dark blood, with fibrinous coagula; in six, the vasa vasorum were highly injected, —the dark blood, and occasionally coagula, extended into the carotid, brachial, femoral, tibial, ulnar, and radial arteries.

ABDOMEN.

Peritoneum. — In nine, this membrane was highly injected; in six, evidently inflamed; and in three there was albuminous effusion, with some turbid serum. In one, the omentum was very vascular; and in another, it was inflamed.

Stomach.—Generally of a white color both on its peritoneal and mucous tunics, and containing more or less of the rice water fluid.

In seven, there were distinct vascular patches on the mucous coat, with several ecchymosed spots, varying in size, from that of a sixpence to that of a half-crown; and in all, there was manifest softening. In one, the mucous tunic was eroded.

Small Intestines.—In twelve there were evident marks of high inflammation, and vivid and extensive injection; in nine, ecchymosed patches; in four, mucous tunic softened in many points; and in one, incipient ulceration. Contents of a viscid white mucous, or greenish color; and in two, they are bloody.

Large Intestines.—Transverse arch and sigmoid flexure of colon, commonly spasmodically contracted. In five, vascularity, with ecchymosis. Two inflamed, with softening; and one with ulceration. Two with dark venous congestion, similar to intestine in strangulated hernia.

Contents generally rice-watery, or gruelly and flocculent, occasionally greenish and viscid. In many, the colon, with the exception of the caput cæcum, was empty.

Liver.—Very various in color; two with Bright's yellow deposit. In some, the vena portæ were moderately congested; and, in one, the biliary ducts full of bile.

Gall Bladder.—Generally two thirds full of rather inspissated olive green bile. In the twenty cases, ten were full of this fluid; the others varied from a little bile to two thirds.

Pancreas.—Generally healthy.

Kidneys.—Commonly healthy; but varying, like the liver, according to the habits of the individuals. Three were slightly congested; one gorged with the dark blood; and another presented a livid appearance.

Urinary Bladder.—In all, contracted, and almost empty. When any fluid was present, it was about a drachm of mucopurulent. One, however, was contracted horizontally, and contained five ounces of limpid urine."

Saline injections in Cholera. — Among the various therapeutic mirabilia which the treatment of cholera has furnished, none can be compared with this in the boldness of the practice, the plausibility of the indications on which it proceeds, nor in the interesting phenomena attending its administration. If we may believe the relations of the English and Scotch practitioners, — and many of them are of the most authentic character — it would seem to rival even the fabled success of Promethean ingenuity. The warmth, activity and intelligence of health have been restored to bodies which were a few minutes before almost as inanimate and

ghastly as the tenants of the grave, and ease, and even hilarity have been substituted for the mute and paralyzing agony of collapse.

But these astonishing effects are but too seldom the harbingers of final recovery. Short respites only are they in most cases, and the impending doom is not avoided.

In connexion with this discouraging remark, however, it should be considered that, as yet, the injections have only been tried in the most desperate cases. We think it would be justifiable to employ them, at an earlier stage of the disease than has yet been treated so, when the quantity of the injected liquid need not be so great, and when the system had not entirely lost its susceptibility to medicinal agents calculated to give permanent relief.

Whatever efficacy in the cure of cholera, may hereafter attend these means, by varying the time or manner of their administration as experience may suggest, they have already established the following curious fact, and useful practical suggestion.

1st. We are taught by them what we should have been slow to believe before, that upwards of a gallon of this saline liquor, may be introduced into the blood-vessels in the course of an hour or two without producing death, or, so far as is known, occasioning any disease.

2d. They have revealed to us a means of reviving persons suddenly smitten down by cholera, and perhaps also with some other diseases, to whom a few hours of ability to think, speak and act, are of inestimable value either for adjusting their worldly affairs, or consolatory intercourse with friends, or for receiving those sanctifying rites of religion, which by many persons and sects are considered so essential to the future welfare of the soul.

Since the injecting practice has been so favorably noticed, several practitioners have appeared in the London Journals, claiming the distinction of having originated it, and their claims are urged in many instances with not a little of that modest assurance which must be acknowledged to be a prevailing, but certainly an unseemly trait in the professional character of our brethren of the British metropolis.

It appears to us that Dr Latta of Leith, is to be regarded as the author of this practice, and we republish below some cases and remarks communicated by him, and also those of Mr Tweedie, who is favorably known to the physicians of this commonwealth, as the author of a treatise on fever, which is among the publications of the Massachusetts Medical Society. E.

Case I. — *Forty Pounds injected in twenty hours — Apparent Convalescence for two days — Ultimate Death.* A prostitute of the very lowest grade was brought to the hospital on the 28th May, at half past 1, affected with cholera: the case was one of

more than ordinary severity. I not being present, she was subjected to the ordinary saline treatment recommended by Dr Stevens, till four o'clock. As soon as I arrived I found her sinking rapidly, tortured with the most fearful spasms, distressing retching, severe diarrhœa, extremities cold, pulse gone, eyes sunk, and other symptoms of confirmed collapse. Her body exhaled a most disagreeable odor, which increased with her distemper, so much so that the windows, constantly open, scarcely admitted pure air enough to render the apartment where she lay tolerable to the attendants. The saline injection was instantly thrown into the veins, which was followed by the most agreeable consequences, having entirely removed the insupportable load from her chest, which was a source of much anguish. After eight pounds were injected, she experienced entire relief.

Diarrhœa had all along been very profuse, but now it became excessive, running through the bed, all over the floor, in consequence of which the rallied powers again gave way, requiring to be stayed by a repetition of the injection. So rapidly did she sink, that it became necessary to inject with more than usual speed, which, for reasons afterwards to be noticed, should always, if possible, be avoided. About 20 pounds were injected on three different occasions within 40 hours, by which time the symptoms of cholera were removed, the diarrhœa considerably lessened: the stools were now tinged with an increasing flow of bile; and the urinary secretion was restored. For two days she seemed to be tolerably well. Previous to the attack of cholera, she had been under treatment for diseased liver, and was also subject to pectoral complaints: the symptoms of these were now aggravated, for which she was bled, leeched, and blistered, with but little effect. Her stools now became of a dark olive color, and like the increasing fetor of her person, were very offensive. The whole surface assumed a leaden hue, was wan and clayey, and she gradually sunk, and expired without a struggle.

Case II. — *One hundred and thirtytwo ounces injected during the first two hours — Injections repeated — Temporary improvement — ultimate death.* On the 27th of May a middle aged female was brought to the hospital in *articulo mortis*. She had been seized with cholera early in the morning. The diarrhœa and vomiting, which had been very profuse, had so thickened the vital fluid, by draining off the serum, that by noon the exhaling vessels gorged with their own thickened contents, ceased to furnish that fluid which constitutes the dejections so characteristic of the disease. When she was lifted from the cot in which she had been carried to the hospital, her head dropped on her chest, her arms hung dangling and lifeless from her trunk, the whole surface was blue, and her entire aspect was that of one whose

spirit had just fled. Unconscious of existence, she was laid on the heated mattrass. I instantly opened a vein in the right arm, and threw in 132 ounces of saline fluid, keeping the temperature above 105°. At first it was rapidly introduced, but as soon as symptoms of resuscitation appeared, I proceeded more slowly, and, excluding some considerable delays, accomplished the whole in about two hours.

Having finished, I felt much gratified with the result: the poor woman was in a short space restored to the entire use of her senses. But though the result was much more fortunate than I had any reason to expect, I entertained not the most sanguine hopes for her ultimate recovery: for though her other symptoms were good, the radial pulsation continued very feeble. Diarrhœa returned; and notwithstanding the free application of stimuli, externally and internally, again she became pulseless, and by midnight she was as low as ever. Eighty ounces of saline injection again restored her, and by two in the morning (May 28) she was greatly improved. Respiration not in the least laborious, though quicker than natural. Pulse 120, small but distinct; countenance natural, red; tongue moist and warm; temperature of surface restored; skin moist, &c, &c. Towards morning diarrhœa returned; she continued slowly to decline, in spite of every remedy; the surface became cold and clammy, the pulse ceased, and she complained of extreme debility. So I was compelled again to have recourse to the only thing that produced any impression, and at 4 A. M. four pounds nine ounces were injected, which drew from her the most grateful acknowledgments of relief. Mercurials, tonics, and stimulants, with effervescing draughts, were administered throughout the day, and before night she had passed five bilious stools, and micturated freely two or three times. Symptoms of cholera were now gone; she passed the night easy, and next morning (May 29) the report is — has no complaint except debility and considerable thirst. Pulse 104; tongue dry and red. Breakfasted with relish; bowels free; dejections very dark; passes urine freely. During the forenoon seemed absent. In the afternoon she became incoherent. During the night she gradually sunk, and died next morning, without any symptoms of collapse or of any local disease.

Case III. — *Eight pounds injected in half an hour — Injections repeated — Recovery.* A middle aged man, of sober, industrious habits, in whose family several cases of cholera had occurred, was, on the 27th May, at 9 P. M. seized with the first symptoms of that disease, and was subjected to its ordinary treatment seven hours previous to his coming under my care. On the morning of the 28th, at half past five, his countenance was pallid, his eyes sunk, his voice choleric in the highest degree. Pulse 118,

fluttering. Every feature sharp, and extremities cold. Had had saline injections per anum, laxatives, opiates, stimulants, hot applications, sinapisms, &c, &c; and notwithstanding sunk rapidly, particularly during the hour previous to injecting the veins, an operation which was unavoidably delayed, I being engaged with another patient. In half an hour eight pounds were injected, with entire relief to every unpleasant feeling, if we except the irritation arising from the sinapisms. He was ordered to take hourly small doses of calomel and opium, and beef tea enemata, with muriate of soda. Diarrhœa continued copious and frequent, and by 2 P. M. seemed sinking fast; had almost lost his sight. Recommenced the venous injection; his sight soon began to improve; and before a pound was injected, it was quite restored. About six pounds expelled all his uneasiness, and from that moment he continued to improve, using only beef tea, mercurials, and effervescing draughts. Early next morning his stools became bilious, the secretion of urine was restored, and he was convalescent on the third day.

Remarks. — Here are three cases having different features: the first proving fatal from organic disease, the second from the effects of the most inveterate diarrhœa, and the third recovered by the prompt and easy application of venous injection.

With regard to the cause of the death in the first case I have nothing to say, it being now generally admitted that the individual laboring under chronic disease, like the drunkard or debauchee, is very liable to be assailed by cholera, and that in consequence of such an attack, the dormant disease developes itself more actively, and very often proves fatal, or issues in confirmed bad health. With regard to the second cause of death — viz. the diarrhœa and its consequences, this is a subject which appears of most interesting importance.

The watery diarrhœa is evidently derived from the extremities of the minute vessels ramifying on the stomach and intestinal tube: these are, in some way or other, forcibly dilated, affording exit to the serum and crassamentum of the blood; nay, in the advanced stage of aggravated cases, even of the red particles, which last symptom, accordingly, always affords an unfavorable prognosis. Now, whether this effusion is only sympathetic of hepatic obstruction, or is an idiopathic disease produced by the invisible meteorological cause, may be subject of dispute. At all events, if we consider that those individuals who seem most liable to the attacks of this terrible disease, are those whose diet and habits of life are very apt to derange the functions of the liver — that pain is often very acute in the hepatic region — that the secretion of bile is among the first that ceases — that its restoration is hailed as a happy omen — that it continues morbid, and a source

of great uneasiness long after the stage of collapse is past — that hepatitis very frequently supervenes during reaction — that a diseased state of the organ is very generally met with after death — that medicines, such as mercurials, which act on this viscus, are of much utility — that it is always gorged with blood ; — also consider that the nature of the hepatic circulation is such as renders it very susceptible of obstruction, more especially if the blood is reduced to a viscid state by the abstraction of a portion of its serum, and the nervous energy subdued by the influence of any sedative agent ; and, besides, that the effusion of serum in cholera is confined to those viscera which return their blood through the veins, in which viscera venous congestion is always strongly marked ; all these circumstances certainly render it probable that hepatic obstruction does exist, preventing the return of the blood from the bowels, producing in these the usual consequences of obstructed circulation — the effusion of serum. In other parts of the body the blood returns to the heart, flowing from branches to trunks, and when it reaches the centre of circulation, if thickened from the draining effects of diarrhœa, it collects ; thence producing the insupportable load so symptomatic of cholera ; but so soon as saline fluid is introduced along the veins, and directly mixed with it, then free circulation is restored, and the anguish is removed. The blood thus restored to a fit state for circulation makes its circuit, and congestion is removed from every viscus except the liver. There the circulation is widely different, the thick grumous blood gorges its venous ramifications. The obstruction thus produced must continue until, by slow degrees, it is penetrated by the more fluid circulating mass. Until this is accomplished, diarrhœa must continue : the symptoms of its restoration are a cessation of the serous diarrhœa, and a return of the biliary secretion.

But in the second case noticed above, such obstruction seemed entirely removed, and the secretion eventually restored, and yet the patient died. Even so it happened : but then we must take into account the circumstance that the diarrhœa being profuse, and often renewed, had carried away a large proportion of the more substantial principles of the blood, which though not immediately necessary to existence, yet the deficiency is soon felt, and if not supplied, the vital fluid may speedily fall short of its intentions. But not only was such a pernicious change effected on the blood, but the fearful extremity to which the poor woman was reduced must have proved an almost irrecoverable shock to the nervous system, and from the abstraction of energy favored the deposition of fibrine which was found in the heart, which was doubtless the cause of the very feeble pulse, which induced me to form an unfavorable prognosis of the case.

If the view I have taken of the cause of the diarrhœa is correct, it points out the need there is for the early use of the saline injection, the benign effects of which are clearly demonstrated in the third case. It is not improbable that the quantity of salt formerly recommended may be too large, particularly if we require to repeat the injection: circumstances which I may notice on some future occasion have induced me to think so, and accordingly, in each succeeding injection, I diminish the quantity of saline ingredients.

I may mention, though I have no permission for doing so, that solutions of quinine and of morphia, pure water, and even blood, have been all used by some medical gentlemen, but not with such encouragement as induced them to persevere. Albumen has also been used in the saline mixture, but given up, though I would certainly be disposed to continue its use in extreme cases, when the diarrhœa has continued profuse, and has returned after each injection.

I regret my letter has turned out so voluminous; I trust, however, I may be excused for such indulgence, and have the honor to be, sir,

Your most obedient servant,

T. Latta, M. D.

Leith, June 13, 1832.

Sir, — A case of cholera has just been treated in this establishment upon the plan lately recommended by Drs Latta, Lewins, &c, in Edinburgh. I have drawn up the particulars, and, as they may be interesting to some of your readers, I beg to offer them to you for insertion in the next number of the Gazette.

I am, sir,

Your obedient servant,

Alexander Tweedie.

3, *Abchurch-Lane, June* 4, 1832.

Case I. *in which nearly a gallon was injected, with temporary improvement, but ultimate failure. — Appearances on Dissection, and Remarks by* Mr Tweedie. Charles Lamb, æt. thirtysix, admitted into Abchurch-Lane Hospital, at 11 a. m. Sunday, June 3, 1832, from the "Dispatch," Whitby sloop, now lying off Wool Quay, Custom-House.

This man is a publican and gunsmith at Whitby, which place he left on last Tuesday week, as a passenger on board the above vessel. He arrived in London eight days ago, and immediately went on shore, where (in the neighborhood of Wapping) it appears he has been living in a most intemperate way, till, having spent all his money, he found a bed for the last two nights on board the vessel in which he came to London as a passenger.

Last night he went to bed sober, about ten o'clock, having eaten a little bread and bacon for supper, and being in good spirits and in his accustomed health.* About midnight he got up to go to the privy, and a looseness that now commenced kept him awake till five o'clock, when he began to vomit. At 7, cramps ensued. At 9, he was seen by Mr. W Smith of Grace-church-street, who found him pulseless, and, in his opinion past recovery. At 11 he arrived here, having had, shortly before admission, a cordial and opiate draught. His state, on admission, is as follows :—

General aspect of features very much collapsed and congested — of a dull, leaden, livid hue. The eyes deeply retracted, nose shrunk, lips livid and cold. Eyes half open, and turned up ; pupils natural ; tongue covered with a yellow moist fur — temperature beneath it 79 deg. Hands lividly blue ; pulse not countable ; skin damp and inelastic ; feet cold, and partly livid. Voice very low ; breathing 36. There has been a cessation of vomiting and purging since nine o'clock ; from report they were very plentiful and like water. He has not urined since five or six o'clock ; complains of pain in the back. He is now suffering from cramps in the hands, legs, thighs, and abdomen, and is urgently craving for cold water. He states, that early in the morning he felt a sensation of singing in the ears, and was very deaf. He has worn a flannel belt (without reference to cholera) many years.

11 A. M. — Ordered warm bed ; hot bottles to feet ; Calomel, gr. v. ex aquâ ; Sinapism. amplum thoraci et abdomini.

12.— Has been much cramped, restless, and very thirsty. He retains small sips of water. Sinapism has had no effect; removed. It was now determined, in consultation with Dr B. Babington, that, as the case appeared to promise an almost immediately fatal result, the plan of injecting into the circulation, as recommended and adopted in Edinburgh, by Drs Latta, Lewins, &c, should be practised.

Quarter past 1 P. M. — The necessary apparatus being provided, we proceeded to the operation shortly after one o'clock, at which time the pulse at the wrist was scarcely perceptible ; at the heart it beat 148 in the minute. Temperature under tongue 74 deg. Respiration 36, and he had just been cramped, and was very restless. The median cephalic vein of the right arm was opened for the insertion of the tube of the syringe, and the following was the fluid for injection, as advised by Dr Lewins, &c. — viz.

Muriate of Soda, ℥ ij. Carbon of Soda, ℈ ij. ; water, 60 ounces ; temperature from 110 to 115 deg.

* He subsequently acknowledged that he had had irritable bowels nearly all the time he had been on shore.

2 P. M. — After a very gradual injection of 22 ounces, respiration 30; pulse at wrist 120. Has just had cramp in the right hand. Quarter past two P. M. — The patient appearing much collapsed after 34 had been injected, the following draught was given: —

Brandy, ℥ ij.; Ammon. S. Carb. gr. v.; Aquæ calidæ, ℥ ij. M. This was instantly rejected; and after a brief pause arising from the apprehension that he was about to die under our hands, the injection was again proceeded with very gradually.

3 P. M. — Fiftyfive ounces have now been injected. His pulse is obviously stronger (120); voice firmer; countenance more lively. He expresses himself as feeling better, and is quite free from cramp. Has just past a stool of alkaline property, fluid, with floating flakes, and of a pale yellow hue — in quantity about ℥ vj.

Sir William Russell, who had been invited, now arrived, and not only approved of the measures that had been adopted, but was of opinion that the injection should be repeated if the patient should lose any of the ground that had been gained, Sir William looked upon it otherwise as a hopeless case.

Half-past three P. M. — Another stool, like the last, but less in quantity, and rather feculent in smell. Hands are warmer; pulse 120, weaker than half an hour ago. Respiration 36. Says he is better. Has taken, to quench his thirst, the following draught occasionally, and is not restless.

Acid. Tartar. gr. xx. Sodæ Carb. xxv. Aquæ ℥ ij. actu efferv. sumend.

Ten minutes to 4 P. M. — Pulse irregular, and very weak — so indistinct as not to be counted at the wrist; between 120 and 130 at the heart. Breathing 42; surface warm, but not moist; hands less warm than when last felt; voice husky; complains of thirst; countenance again more collapsed.

Rep. Injectio.

Quarter to 5 P. M. — Fiftyfour ounces have been injected. Pulse 120, stronger than at any previous period. Voice firmer; intellect very complete; he notices all things around him with much shrewdness, and looks greatly enlivened. Whilst the injection was proceeding he had a dejection, about a pint, colored like dark urine; but he says he is sure there is no urine in it. It smells feculent. He has drank water and thin arrow-root from time to time, all of which he retains. There is a gentle dew on the forehead; breathing 42, very hurried. Whereas before the injection he was very restless, he has now turned quietly on his side, and is composing himself to sleep.

℞ Ext. Hæmatoxyli, ; gr. x. T. Catechu, ʒ ss. Aquæ. Menth. Pip. ℥ iss. M. ft. haust. st. s. et post sedes singulus.

5½. — Pulse keeps up; perspiration over the body.

6 P. M. — Has been in a profuse clammy sweat since half-past five o'clock, and now complains of intolerable heat, tossing off the bed-clothes; pulse is very irregular, scarcely to be felt, ranging from 120 to 130; breathing 48, much oppressed; there is an unsettled manner about him, which, however, does not amount to delirium: has just passed a stool similar to the last noticed, and about half-a-pint in bulk.

6½ P. M. — He is pulseless, and gasping for breath slowly, as if now dying. Though alone, with only nurse's aid, I am about to inject again.

¼ to 7 P. M. — Dead; ℥ xij. of fluid thrown in; but he did not rally, and died under the operation.

The body was opened 13 hours after death in presence of Dr B. Babington, Messrs W. Smith, Charles Gaselee and A. Tweedie.

External. — Much lividity posteriorly, as well as interiorly, on the legs, thighs, scrotum and parts adjacent; ears quite blue; limbs rigid; configuration very muscular.

Chest. — Pleuræ plastic and dry; right lung healthy; left lung adherent by old bands; neither inordinately congested; heart rather flaccid; pericardium contained ℥ ij. of liquor; coronary veins *not* unusually injected; right ventricle and auricle loosely full of dark, currant-jelly like blood, not fairly separated, and quite as dark as in other cases of cholera; vena cava ditto, and not remarkably distended; left ventricle the same, in less quantity; left autricle empty; aorta contained a small quantity of the like.

Abdomen. — Cavity dry and plastic; omentum natural, if anything a little redder than healthy; surface of small intestines not nearly so pink as in most cases of cholera, indeed very little redder than in ordinary disease; liver pale, large, rather fatty, and containing little blood; gall-bladder nearly empty; stomach natural without, *pale* within, and containing about ℥ viij. of the fluids lately taken; there was roughness, in a very dubious degree, of the inner coat; small intestines, from duodenum downwards, containing a large quantity of watery fluid, like very thin gruel, or barley-water, of alkaline re-action; mucous membrane quite pale and watery; no pasty matter adherent anywhere; at the lower part of ileum a few, *and very few*, single glands enlarged; large intestines natural without, ensanguine within, containing similar watery fluid to that found in the small bowel; no enlarged glands; kidneys, &c, &c, sound; urinary bladder literally empty, and firmly contracted.

Head. — Brain and membranes natural; there was about ℥ j. of fluid in the ventricles, and at the base together. No other morbid existence was discovered.

REMARKS. — There were many singularities in the life and death of this patient. Before the first injection of fluid he was

in a most restless condition, with a cold sweat over his body; and in such an extreme state of collapse and depression that there seemed no prospect of other than an almost instant death. The injection rallied him; but even whilst this was in progress, at one period ($2\frac{1}{4}$ P. M.) he appeared so nearly *in articulo mortis* that we were about to desist: nevertheless, we persisted, and he roused; the cold sweat completely ceasing. At the second injection, too, we thought he was breathing his last; however, towards its termination, he became marvellously restored; his pulse and warmth rose; and his feelings were so happy that he was enabled, to our great delight, to make shrewd remarks on the objects and events about him, and even to be jocose and facetious respecting them. This state, as well as the degree of restoration that had now been attained, will best be illustrated by the relation of a few anecdotes. Thus, towards the close of this last injection, I happened to notice, "Well, we have almost injected fiftysix ounces." "Ah!" replied he, "I shall contradict that: there are only fiftyfive and a half: don't you see you have spilled some." It was observed that the veins on the back of his hand seemed more full. "Yes," he said, "something must be full after all this." Some brandy was put into a little arrow-root for drink. "What is here," he asked, "besides arrow-root." "Nothing but a little sugar," said nurse. "I am sure there is something else." "Only a little brandy to flavor it." Do you call that nothing," said he, as he finished the grateful draught with much apparent satisfaction, exclaiming, in a tone of sincerity, as he returned the cup into nurse's hand, "thank God for that." In this tone did he converse, familiarly and jocularly, so that it was impossible for us to withhold our sympathy and congratulation; but this bright prospect was only of brief duration, for within half an hour he began to flag; perspiration came on, at first warm, then cold; and rapidly fatal was the advance of his illness from this period.

This was one of those cases in which from the first it seemed that "death had marked him for his own."

It is strange that though one hundred and twentyone ounces, (nearly a gallon) of fluid passed into the vein, the blood in the *right auricle* of the heart, and indeed everywhere else, should nevertheless have been so thick and dark as it was: this is the more remarkable when it is remembered that twelve of these ounces were thrown in during the last eight or ten minutes of life — in fact, while the patient was dying. The serous cavities were quite dry, but the quantity of watery fluid in the bowels was very plentiful; so that it would seem as if the watery parts had found their way into the intestines from the circulation in an infinitely more expeditious and complete manner than the existing state of physiology had prepared us to anticipate.

As immediately arising from, and connected with this case, I would most respectfully throw out the following queries :—

1st. What would be the effect of such an injection into the veins of an individual in sound health?

2d. Whether there are not other diseases besides cholera in which this mode of treatment may be used with advantage?

3d. What is the explanation of the circumstance noticed in the post mortem inspection of the foregoing case, that no visible trace of the injected fluid was to be found in the general mass of the blood, although ʒ xij. were injected as the man was dying?

4th. Is it advisable to inject muriate of soda in this way? Common salt is a purgative, and is in daily use for that purpose in enemata. Will it not be purgative also when injected into the veins? The quantity contained in one hundred and twenty ounces of fluid injected is ʒ ss., quite enough to *induce* purgation under common circumstances.

Case II. — *In which Injection into the veins was practised without success at the Free Hospital in Greville Street.* On the 31st of May, about one o'clock P. M. one of the nurses was attacked with cholera. She had the usual symptoms, but with the cramps more than commonly severe, and was passing fast into a state of collapse. The saline treatment was used by Mr Whitmore, as in the cases formerly detailed in this Journal, under which she gradually rallied, and at noon, on the 4th inst. she was considered by her attendants as nearly out of danger. About 7 in the evening of that day, however, she was seized with violent cramps in the stomach, when the saline remedies were suspended, and some opening medicine, with a small quantity of calomel and opium, was administered. She continued to get worse, and in consequence of a mistake on the part of her nurse, the saline powders were wholly omitted. She continued very ill all day on the 5th, the stomach being so irritable that no medicines could be retained for a moment. On the 6th she was so ill that not the slightest hope was entertained of her recovery, and Dr Stevens proposed saline injections into the veins as a *dernier ressort.* There were six medical men present, all of whom concurred in the propriety of the experiment being made. The operation was performed by Dr Stevens and Mr Marsden, one of the regular attendants at the hospital. About three pints, of the same strength as used in Scotland, were thrown in, soon after which the pulse rose, becoming fuller, and the blood more florid. The apparent benefit, however, was but temporary, and at seven she expired.

It may be proper to state that the relapse, with cramp in the stomach, which led to the suspension of the saline treatment, was brought on by her having eaten a lobster, (a whole one!) which had been brought in to her clandestinely by a companion, a few hours before.

There is reason to believe this case was complicated with an affection of the brain, and altogether it seems to have been one in which little was to be expected from the injection; at any rate it did no harm, and perhaps prolonged life a few hours.

As an offset to the above case, it may be stated that Mr Whitmore has had in all about thirty cases of cholera since he commenced the saline treatment, and of this number he has lost only two; one of these cases was that of a man in the above hospital, who was brought in in the very last stage, and died soon after admission; the other is the case of the nurse detailed above. In addition to these, there have been lately in the same hospital seven cases, six of which were very severe. They have all been under the saline treatment; four of them have been dismissed cured, and the other three are now considered as out of danger.

Organization of Paganini!!

At a late "seance" of the Royal Academy of Sciences at Paris, the sapient auditory were entertained by a memoir on the above subject.

Dr Bennati thinks that the modern Orpheus owes his excellency, not so much to practice, as to an original peculiarity in the organization of his outer man; he tells us that all the machinery of his arms is so beautifully pliant and moveable, that Nature evidently intended him for a great fiddler! Moreover, the trumpets of his ears are marvellously adapted for the reception of sound!!

His cerebellum is unusually large; (indicating his love of music we suppose!!) In short, ends Dr Bennati, Paganini is an inimitable violiniste, by the necessity of his corporeal structure!!! —*Archiv. Géner.*

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"Itaque ad experientiæ et scientæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I.—GLOSSITIS.

THE attention of medical men has not been often directed to this somewhat rare disease. Dr Good has not given it even a passing notice. It is not very easy to account for the fact that the tonsils and the salivary glands are *often* the seat of inflammation, the tongue *very seldom*, unless from the effects of mercurial salivation, or local injuries. In idiopathic inflammation of the tongue, there is a pain at first dull and heavy, but at length becoming acute and severe, situated in the space between the angles of the lower jaw, and directly over the os hyoides, and occasionally shooting into the ears.

There is difficulty of swallowing of a peculiar kind, which to the observer, seems like the difficulty which attends inflammatory sore throat, but the patient readily distinguishes that the pain of the efforts in deglutition is not at the moment when the morsel passes *down* the larynx, but when the tongue forces the morsel backwards into the pharynx preparatory to the act of deglutition. The speech is babbling and confused, like the utterance of a drunken man. There is generally some degree of pain on pressure underneath the chin, and a swelling, oftentimes to the extent of the full double chin of corpulency, takes place.

The invasion of the disease is usually announced by rigors, thirst and head-ache. The tongue becomes higher colored than natural, is usually coated, and all its movements are painful. As the swelling of the tongue increases, the return of venous blood is retarded, and the face becomes flushed and

dark colored, and the difficulty of respiration and swallowing occasions a sense of suffocation very distressing and terrifying to the patient. The salivary glands become excited to pour out their fluids in increased quantity, which usually produces some sensations of relief. The pulse is usually full and hard, and the skin hot and dry. There is apt to occur an intense head-ache from determination of blood to the head, and a teasing cough, which, with the other symptoms, deprive the patient of sleep or rest.

Although the diagnosis may in general be readily deduced from the history of the symptoms, it is not always free from embarrassment. We have already noticed its similarity to sore throat, and the distinction is the more difficult from the difficulty of inspecting the fauces in severe cases of both diseases. Glossitis has been confounded with ranula, a mistake of a very important character, since it might lead to attempts to puncture the inflamed part beneath the tongue on the supposition that it was a salivary sac. When ranula has reached a large size and an inflammatory action has become established in the sac containing the viscid fluid producing this disease, the inflammation extends to the fauces and the tongue, and difficulty in deglutition, speech, and respiration, may follow precisely as in idiopathic glossitis. The writer has seen a case of ranula presenting these appearances, in which, on making an opening beneath the tongue, four ounces of fetid fluid mixed with pus was suddenly evacuated. The history of the commencement and progress of ranula will generally point out its difference from glossitis, but ranula, although much slower in its progress, is not always observed at the time of its commencement, and glossitis is sometimes sub-acute during the first few days of its attack, and not marked by any pain sufficient to attract notice.

The principal reason why the diagnosis of this complaint is to be considered important, is, that it is far more dangerous than any other with which it can be confounded, and requires for its removal a more active treatment. Bleeding is the remedy most directly indicated, and probably there is no complaint over which local bleeding has more control. We have already spoken of the rare occurrence of this disease, and acknowledge our own inability to furnish an explanation—not being satisfied with that of a learned writer, who supposes that the Supreme Arbiter of the universe will not permit an organ so essential to speak his praise and glorify him, to become often disabled by the occurrence of disease! Four cases only of

the disease have occurred to the writer of these remarks, all of which have terminated by resolution. The first case was that of a sailor, thirty years of age, of intemperate habits. The disease came on after exposure to wet and cold, and was attended throughout, with a high degree of arterial excitement, a hot skin, thirst, and loss of sleep. The tongue swelled gradually so as at length to fill the whole fauces and prevent the possibility of closing the teeth. Deglutition became entirely obstructed, and speech and respiration were much impeded. The disease yielded slowly to repeated venesection and moderately deep scarification of the tip of the tongue. The two next cases were in young subjects under twenty years of age. These cases were severe, and were entirely cured by the free application of leeches under the chin. The next case was that of a lady twentyfive years of age, and was mistaken for a case of ranula. The disease had existed for a week, and had reached a painful extent, before its nature was understood. Two applications of leeches, which removed twenty ounces of blood, and the operation of a purgative of senna and sulphate of magnesia, which the patient found it extremely difficult to swallow, caused the disease to disappear almost entirely in twentyfour hours.

The issue of these cases fully demonstrated to the writer's mind, the value of topical bleeding, with which he was first strongly impressed by the paper of M. Malle in the Memoirs of the French Academy of Surgery.* The author first cites the experience of his father in two cases in which the tongue became enormously swelled from inflammation—the sequel of malignant fever. In the first case, successive bleedings from the arm, the foot and the jugular vein had been tried with out success. The tongue protruded from the mouth and suffocation seemed impending. M. Malle, fixing the teeth apart with a piece of coin, proceeded to make three incisions from the base to the tip of the tongue, one in the middle, and the other two equi-distant from the first incision and the edges of the tongue. These incisions penetrated through two thirds of the unnatural thickness of the tongue and caused a free discharge of blood. An hour after this the patient recovered his speech, and the next day, when the tongue had recovered its usual dimensions, these formidable incisions appeared like superficial scarifications. The second was a similar case in which the same treatment was adopted with similar efficacy.

M. Malle proceeds to the relation of the following

*Tome 14, 12mo.

case. A patient convalescent on the 18th day from a malignant fever, was attacked with painful swelling of the tongue in the month of February, 1785. He had been bled by the surgeon of his regiment two hours before M. Malle visited him. A second bleeding was prescribed without effect. Under the belief that the swelling of the tongue was critical, and to procure an issue of the humors which caused it, M. Malle made two long and deep incisions lengthwise of the tongue at equal distances from its edges. From the discharge of blood which followed the incisions the tongue became reduced in size, so that on the third day it had attained its natural dimensions, and on the fifth the patient was convalescent and the two incisions perfectly healed. The fourth case reported by M. Malle was in the practice of his father. This was the case of a female, and remarkable for being confined to one side of the tongue. She was at first attacked with difficulty of deglutition, but on examination of the mouth and throat, nothing was discernible but an extreme dryness of the parts. This symptom was relieved by emollient gargles and cataplasms; the patient recovered the power of swallowing, and it was not until six or seven days from the first of the attack that the true nature of the difficulty developed itself; when, in the night, the left side of the tongue became swollen in its whole length, impeding respiration, and rendering deglutition impossible. A long and deep incision on the affected side was followed by immediate resolution of the disease, and three days after the patient was perfectly restored.

Inflammation of the tongue may be produced by the action of acrid substances upon the mucous membrane of the mouth and the papillæ of the tongue. Instances of this in a partial degree are very common. Some persons cannot eat strawberries without immediately experiencing this effect. The most curious case of this kind on record is quoted from M. Dupont by M. Malle. It is the case of a young cow-herd who laid a wager with one of his companions that he would masticate a live toad, beginning at his head. He accordingly commenced the process, but not finding the morsel quite so palatable as he expected, and experiencing a sharp, pungent heat in his mouth, he spit out the mouthful. His companion immediately seized upon the stakes, averring that the toad had not been triturated according to contract. The former, however, —relishing the loss of his wager still less than the venom of the toad—returned to the charge, and with more valor than discretion, resumed his bonne bouche, and actually chewed it up to the

satisfaction of his antagonist! Two hours after this he had cause to repent of his folly and temerity. His palate, tongue, and interior of his cheeks and lips, were considerably swelled. In four hours he had lost all consciousness, had nausea, sweats and hiccup. Twentyfour hours after the exploit he was visited by M. Dupont. The first symptoms continued, and in addition the countenance had assumed a blue tint, the saliva flowed involuntarily, and in small quantity; and deglutition was impossible. The tongue, of a dark brown color, protruded from his mouth two fingers breadth and a half, and was at least three in thickness. Respiration was so much impeded by the swelling of the parts in the neighborhood of the larynx, that M. Dupont had determined immediately to perform the operation for bronchotomy, if the other measures he was about to try did not produce an immediate and salutary effect. The immediate indication was to prevent the threatened gangrene of the tongue by reducing its size. To effect this M. Dupont made two deep incisions the whole length of the tongue, which discharged blood freely. He then directed him to be bled from the neck twice in four hours. The immediate benefit of these evacuations was so great that the patient was enabled to swallow an emetic which operated to discharge the stomach and bowels very freely, to the very great and sudden relief of all the symptoms. No further measures of importance were required, and the patient was convalescent in fifteen days. A somewhat similar case, but fatal in its termination, is reported by Ambrose Pasé of two merchants poisoned by the leaves of sage mingled in their wine, without having been washed, and which were discovered to have been infected by the saliva of toads. We may safely believe Parœus in all which he says of *himself*, but his toad story carries rather an apochryphal air with it.

The most important practical lesson to be deduced from these cases is the great value of topical bleeding. It is immediate in its effect and almost certainly successful. The severe incisions, although probably without danger in themselves, may no doubt for the most part be advantageously dispensed with in favor of leeches. These should be applied to the skin over the base of the tongue, and to that organ itself if the external bleeding is not effectual. M. Malle was not the inventor of the practice of topical bleeding by incisions, in this case, as his son himself informs us. Job à Mee'kren who flourished in the preceding century, preceded him in the use of it. Topical bleeding with leeches in this disease has this excellence over all other remedies, that it can be applied under any cir-

cumstances. Whereas in the worst cases in which the tongue becomes enormously enlarged, the difficulty of making free incisions is very great, and sometimes amounts to an impossibility. The same difficulty occurs in the use of purges and emetics, the effect of which is so advantageous in checking the progress of the symptoms.

These remarks will be concluded with the following case extracted from the dissertation of Dr Ajcardi, quoted in the Dictionnaire des Sciences Medicales, T. 18, p. 486.

An earthen-ware merchant, twentyfour years of age, of a robust and sanguine temperament, having been exposed to the impression of cold air, in a long journey, was surprised to perceive on waking in the morning, a swelling of the tongue so considerable and painful that his speech and deglutition were impeded. On attempting to rise, he experienced a sort of vertigo and soon after a chill, followed by a burning heat. On being brought to the hospital he was bled ten ounces. His pulse was 112 in the minute, hard, tense, resisting pressure. The tongue enormously swollen, could scarcely be drawn within his lips. His face was very much flushed. Blood to the amount of a pound was taken from the jugular vein. He was placed on a low diet with a drink of barley water and milk.

The next day he got a second bleeding from the arm, and an hour after his speech and swallowing became less difficult. The pulse fell to 84 in a minute, and was more full. The heat had become natural and the respiration free. Deglutition was still difficult, opening the mouth was painful, and the tongue was red and tender. Another bleeding of four ounces was had from the jugular, and twelve leeches were applied beneath the chin which procured the discharge of about two pounds of blood. The tongue showed a sort of false membrane, white, thick, extending from the base to the point of the organ. He had a tranquil night and a moist skin.

On the third day he had another bleeding from the arm of ten ounces. The tongue was now protruded with less difficulty, deglutition became more easy and speech more natural. The false membrane of the tongue was thinner and broken in some points. The tongue less sensible to the touch, preserved still towards its point, a slight sensation of heat and burning.

The fourth day the false membrane had entirely disappeared, leaving the tongue red with a slight degree of heat.

The sixth day, the heat and burning of the tongue had disappeared. There was a slight dry cough.

On the eighth day, there was perfect convalescence.

Salem, August 1, 1832.

Art. II.—Cholera in Vienna.

[To the Editors of the Medical Magazine.]

Gentlemen,—A few days since I received the papers accompanying this, which I offer you for publication. They are from Charles T. Jackson, M. D. who is now in Europe. Though he is of the same name with myself, I have not the honor to bear any relation to this young physician, except that of a teacher. He is well known in this region, and not a little out of it, for his acquaintance with the natural sciences generally and with mineralogy in particular. Great however as have been his attainments in that branch of knowledge, his zeal and industry have enabled him to make uncommon acquisitions in the medical sciences. His letter shows how strongly he partook of the anxiety felt by our countrymen in Europe, and especially perhaps by those of our profession, in respect to the occurrence of Cholera in this country.

I would venture to recommend to notice, especially, the observations on the post-mortem appearances in Vienna, confirming as they do those of some of the distinguished pathological anatomists in other parts of Europe.

I am, gentlemen, your obedient servant,

Sept. 8, 1832. James Jackson.

Paris, July 15, 1832.

Dear Sir,—Last summer I made an excursion through Switzerland, Tyrol and Bavaria, to Vienna. During my journey through Bavaria and on my way to Vienna, I heard the most exaggerated accounts of the havoc the cholera was making in Hungary; and it was even said to be actually raging within the walls of the Austrian capital. The terror excited by these stories soon frightened our coachman to such a degree, that he absolutely refused to go any further. It was with the greatest difficulty by threats of non-payment, until his stipulated journey was performed, and a promise to discharge him before we arrived in the city, that we prevailed on him to proceed.

We arrived at length in Vienna on the 8th of September, and found the cholera had not yet made its appearance. Great alarm was however evinced, and splendid processions were daily made to the most sainted shrines, that the Almighty might avert the threatened pestilence. We found the public amusements however were still carried on, and had an opportunity of seeing

something of the natural gayety of the place before the scene changed, and the mantle of death was spread over the city.—On the 14th of September the disease made its irruption in the city. It had been long prevailing at Offen, fifty or sixty miles down the Danube, and had indeed produced terrific havoc. Its approach to Vienna was not marked by the presence of the disease in any of the small towns between that city and Offen, but it made, as it were, one vault from Offen to Vienna. It should be remarked that premonitory symptoms of cholera had shown themselves at Vienna some days before. I was even told on the day of my arrival that one of the physicians had remarked a *choleric tendency* in the diseases of the hospital. During the prevalence of the disease in the place, many persons suffered from derangement of the bowels, and had many symptoms of the cholera in a mild degree, without suffering any other inconvenience. Diet usually restored them to a healthy condition.

When the cholera made its appearance in Vienna the greatest terror and confusion were manifested; flight, in cases where it was possible to flee, was the instinctive resource of the people. The streets of the city were for a few days heard to rumble with the sound of departing carriages, and then all was still as if it were deserted. The remaining inhabitants shut themselves up to avoid every possible source of the supposed contagion.

As I strolled along the solitary streets on my way to the hospitals, my attention was frequently arrested by the solemn funeral pall, transporting some poor fellow to his last home, or the closely covered litter on which was borne the cholera patient, that found its way to the nearest hospital. The people appeared to avoid each other when they were obliged to leave their houses, and held their handkerchiefs to their nostrils to prevent the ingress of infected air.

Knowing how easily people form erroneous ideas respecting the nature of disease, I doubted from the beginning if it was contagious, and soon became confirmed in my opinion, not only by my own observations, but by those of many very intelligent physicians of Vienna. I attended in turn several hospitals, among which are the *Algemines*, *Krankhouse*, *Militair Spital*, *Convict House*, and two or three supernumerary hospitals, devoted especially to the epidemic. The dissections were principally made at the Algemine, Krankhouse, and Militair Spital.

While on my way to Italy I thought of communicating to you the observations I had made at Vienna.—I should have ac-

complished my object while in quarantine at Trieste, but unfortunately was not permitted to lay hands on my trunk containing my papers, unless I was willing to prolong my quarantine seven days.—I had seen enough of the filthy Lazaretto to be glad to escape from it as soon as I could, and did not choose to make such a sacrifice. While at Venice I began the inclosed letter, and not having time to finish it during my short stay in that interesting city, took it to Rome with me and there completed it. Hearing afterwards that the cholera was in France, I was anxious to compare the morbid appearances the disease might offer there, with those I had observed at Vienna. I deferred sending off my letter until my arrival in Paris. Since my return I have been principally occupied with military surgery, as my arrival, 6th of June, was in the midst of civil war. The cholera at that time had nearly subsided ; we had only six or eight deaths per day. Since then the disease has been making progress, and we have this day, July 15th, one hundred and fortyfour deaths. The number has been fluctuating, but has always been gradually augmenting since the 6th June. I have seen three or four dissections at the Hotel Dieu with Magendie. The morbid phenomena were not so marked as I had seen at Vienna, as these cases all terminated in the typhoid stage. The glands of Peyer were enlarged in all these instances, and there were marks of inflammation in the mucous membrane of the stomach and intestines.—I have compared my notes with the observations made at Paris by Dr Pennock of Philadelphia during the violence of the epidemic. We were surprised to find the morbid anatomy in such perfect accord.

We have lately heard the unhappy news, that the cholera has made its appearance in Canada. I hope this news will prove false, like many other rumors we have heard. Fearing however that there might be some foundation for the report, I have determined to send you my cholera gleanings in the imperfect state you find them, in order to make them useful if there should be need, choosing rather to lose some chance of reputation as a writer, than to detain any longer the pages to amend and embellish them.—I ought to observe that the tabular view of the cholera at Vienna is far from a true statement of the number of cases. I send it as I found it, an official document, but observe it diminishes the real number of sick and the deaths. You will perceive why this was done — to prevent long quarantines of Austrian merchandize by diminishing the public fears. Your grateful and affectionate pupil.

CHARLES T. JACKSON.

JAMES JACKSON, M. D.

VENICE, Nov. 21, 1831.

DEAR SIR,—Happening to be at Vienna when the cholera morbus invaded that city, I hastened to improve the opportunity of examining the phenomena presented by this disease. The observations I then made, and the facts I have collected, I shall endeavor to generalize in this letter, which I venture to address to you, confident that the interest you take in every attempt to advance the science of medicine, will cause you to overlook the errors of a hasty composition, made as it were, *en voyage*. As no correct account of the cholera, as it presented itself in Vienna, has yet been published, and the disease has already reached the shores of England, where it is not at all understood; on account perhaps of the difficulties presented to the physician in consulting the morbid appearances after death; the remarks of one who has steadily attended the hospitals and dead rooms at Vienna, during the prevalence of this terrible disease, may not be destitute of interest to the public. Should you deem the following observations of any utility they are entirely at your disposal. Want of time must be my apology for the negligence of composition.

I shall first consider the causes of the disease, divided into remote and proximate. The remote exciting or occasional causes I consider to be the following — 1st. Atmospheric, arising perhaps from terrestrial exhalations.

That the cholera has its origin in an altered state of the atmosphere would appear from the circumstance of its affecting the people of a large city in different quarters at the same time; it being the only common cause to which they were all equally exposed. The presence of this miasm, or cause of the atmospheric insalubrity, has not been directly proved by an analysis of the air, if indeed it is possible to detect it by chemical means. We know that chemistry has never shown the marsh miasm in an insulated state, or even been able to detect its presence by the most delicate processes. It is too subtile for the means of analysis we are at present able to command.

By reason we are nevertheless able to demonstrate the presence of a deleterious air over marshes, and to point out its precise extent in certain cases, even to its height and breadth. The same is true respecting the supposed miasm of cholera. We are able to indicate the streets in which the disease is most likely to prevail, and to determine in some measure the probable height to which it will extend. When chemistry is sufficiently refined, we may be able to demonstrate mathematically the nature of miasmata, and command the means of arresting

its deleterious influence. Every attempt should be encouraged; success would be one of the noblest triumphs of human skill. We have already made some progress in our knowledge of pestiferous emanations. Do we not know for example, that the infected air of hospitals may be rendered pure in an instant by the diffusion of chlorine; that the causes of typhus fever, small pox, and a number of other infectious and contagious diseases may be at once decomposed by these means? What then is the probable nature of a miasm decomposable by chlorine? It must be some combination of hydrogen and other elements, perhaps nitrogen, carbon, sulphur, or some other body having a weaker affinity for hydrogen than chlorine has. Organic particles consisting of carbon, hydrogen, oxygen or nitrogen are readily decomposed by chlorine. We have a clue then to the nature of miasm which should be followed up — direct proof of the nature of deleterious effluvia may perhaps crown the undertaking. It is yet a question whether the cause of cholera is a miasm capable of decomposition by chlorine; the facts are exceedingly discordant and badly observed. Nevertheless great confidence is placed in the disinfecting power of chlorine, and but few instances are known of persons falling victims to cholera where this preservative had been judiciously used. You must be aware of the difficulty in collecting evidence of this nature. The question, whether the precautions had any salutary influence directly on the atmosphere, or whether they act on the imagination of the patient, is yet to be determined. We know the preservative influence that hope, confidence and a feeling of security, have over the constitutions of individuals. How much credit then we must attach to the purifying influence of chlorine is difficult to say. I have no doubt that the various articles sold by empyrics and charlatans, such as amulets against the cholera, relics of saints sold by the priests, &c, had a decided beneficial effect on the minds of the people, inspiring them with confidence and rendering them less liable to attacks of the epidemic. We shall see presently the influence of mental excitement or depression on individuals exposed to the common cause of cholera.

That the cholera is not contagious is proved — 1st. From the manner in which it first invaded the city of Vienna, between which and Hungary a most vigilant double cordon sanitaire was drawn; hence, it could not have been conveyed to the capital by travellers, or by any article of merchandize, for neither the one nor the other were allowed to pass. — 2d. From the circumstance of its affecting a number of individuals at the same time who had

no communication with each other, nor with anything that could be suspected of conveying to them a contagious disease. — 3d. No well authenticated proof has ever been given of the transmission of the disease from the sick to healthy individuals beyond the sphere of the epidemic causes of the cholera. — 4th. The physicians and nurses who were constantly exposed by contact with the sick, were not more liable to be attacked by the disease than others who were not exposed. It should also be taken into consideration that physicians are more exposed to fatigue, and are more subject to irregularities in their hours of rest, &c, during the prevalence of an epidemic. From this circumstance we readily perceive that if some of the members of the faculty were victims to the disease, there were causes enough to account for the fact without having recourse to the notion of contagion. If the disease were contagious, the physicians, nurses and students of the hospitals should have been the first to fall victims to their temerity. The fact is that very few persons thus exposed, suffered from the disease — nor did those who examined the bodies of the dead, suffer from an attack. We were ten or twelve persons thus exposed daily, and sometimes for whole days in succession. None of us had the disease, excepting indeed some trifling symptoms suffered by two of us. The derangement of the digestive organs was the exciting cause of these trifling attacks, which yielded readily to absolute diet and diaphoretic treatment. The cholera in Vienna was not confined to the lower class of society, although the greater mass of patients were the poor and indigent, the reason for which is obvious, as the latter class were more exposed to exciting causes of the disease. The luxurious were often visited by the cholera — and we are able to count princes, princesses, and men of high rank among its victims. Anxiety was always found to be a remarkably powerful predisponent to the disease, particularly with the delicate and nervous. All strong emotions of the mind, that notably derange the digestive functions, are liable to draw on the morbid action we are considering.

Before I proceed farther, let us examine the manner in which the supposed miasm of cholera had its origin and how it travelled to Vienna. Until we know the nature of the miasm, the first question will be difficult to solve; but if we cannot determine from whence it sprung, we can at least determine from whence it did not arise. For example it could not have arisen from the putrefaction of animal or vegetable matter in the places where the disease prevailed; for many places attacked by this disease, are remarkably cleanly cities. Vienna for instance, is in this respect, a

pattern for the rest of Europe. If the miasm does not arise locally, there should be some common source whence it is derived. By consulting the map we can trace its origin to the shores of Hindostan; and we can see it has been very capricious in its march, sometimes going directly forward, sometimes returning on its track, or diverging to some large town out of its regular course. It generally appears first in large towns, and spreads in some determinate direction from them. It does not fear the cold of a Russian climate, although bred in the hot climates of southern India. How does the miasm travel? Does it fly on the wings of the wind; or does it travel by water, following the courses of large rivers? If you take the trouble of examining the meteorological table I send you with this letter, you will see that the wind during the 9th of September was from the southeast, after which the direction was always from the west or northwest. In case the miasm was brought by the wind, it must have been effected by the southeasterly, for in the other direction we had no cholera prevailing. Could not the miasm have been transported some days previous to the irruption of the disease, and have been brought into action by the cold and stormy weather that followed? I can easily conceive this to have been the case. We have numerous examples in the progression of other epidemics, and it can be as easily accounted for as the fact, that persons may carry within them for a long time the latent cause of intermittent fever, which requires but an exciting cause to bring it into action. If we examine the question of the progress of the cause of cholera by water, we find the facts as respects Vienna, directly averse to the supposition. For allowing that the disease came by the river, would oblige us to regard it as capable of going up against the stream, for it must have passed up the Danube against a powerful current to have reached Vienna by this route. I am inclined to believe that the atmospheric cause of the cholera progressed by following the direction of the wind in the first place; that it planted, as it were, the seeds of the cholera, which required only some exciting cause, to germinate and produce the disease. The reason it does not affect all the towns over which it passes, may be, that the exciting causes do not exist in them, whereas they do to a remarkable extent in large cities. What are then the occasional or exciting causes of cholera, allowing that a predisposition to the disease exists? They are very numerous, and vary in force and effect according to the constitution of individuals. I shall place in the first rank of exciting causes all errors of diet, whether of excess, abstinence, or an injudicious choice of aliments. Intemperance in

the use of vinous or spirituous liquors may be considered in the same section.

The most frequent exciting cause at Vienna was the use of indigestible food ; such as crude, unripe fruit, — then in season — plums, apples, &c, salads, fried potatoes, spinage, and in general such articles as are difficult of digestion, derived principally from the vegetable kingdom.

Intemperance in the use of beer and spirituous liquors was a frequent error among the soldiers, and a debauch was often followed by a violent attack of cholera.

Exposure to cold and moisture was likewise observed to be one of the strongest exciting causes—hence those who lived in the streets near the river, and those who inhabited low apartments, such as cellars, &c, were among the first victims. It was likewise observed that the disease prevailed most in the streets parallel to the river ; on what this last fact depended it is difficult to say. Those who were subject to derangement of the digestive organs or who had chronic gastritis or gastroenteritis were particularly marked out as objects of prey to the cholera.

Strong emotions of the mind or the depressing passions were notable excitants of the disease. Any excesses tending to debilitate the constitution were likewise remarked among the efficient causes. In pregnancy, the labor pains were found to excite the disease. A vast proportion of women who happened to be confined at the time the disease appeared suffered from its attack. In many instances the women had no sooner become mothers than they sunk victims to the cholera. A few instances of cholera were observed among the young infants of the foundling hospital, but in general the disease did not select its victims among the young children. Old age was treated with less deference. The fatality of the cholera among the old people was truly remarkable. In the cold and blue stage of the disease they appeared often as if asleep, and never awoke from this state of torpor. The majority of choleric patients belonged to the male sex generally, at or beyond the middle age of life. Consumptive persons were generally exempt from the disease. I saw but one case in which tuberculous phthisis existed and the attack of cholera was of a remarkably mild character. A healthy condition of the lungs appeared one of the constant phenomena on examining the dead. Is there not some relation between this state of the lungs and the absorption of the miasma ? Is not the integrity of the lungs essential to this process, and the presence of tuberculous matter a sufficient obsta-

cle to the absorption of the proportion necessary to the development of the disease. The cholera appears to be a violent fever, belonging perhaps to the remittent class, and having its seat principally in the digestive apparatus — arising, perhaps from a peculiar inflammatory process. We cannot call it a gastritis nor enteritis, for no one ever saw a common inflammation of the mucous membranes of the stomach or intestines, in any degree whatever, produce symptoms like those of cholera. It cannot then be considered as a gastroenteritis of a violent character, unless that inflammation is allowed to be specific. I doubt even if we can call the disease an inflammation, which attacks a healthy man and destroys him in two or three hours, without leaving strong marks of its inflammatory ravages.

Let me now pass to a general description of the symptoms characteristic of the cholera, arranging them in the order of their occurrence or sequence. This table of symptoms was prepared from the observation of a vast number of cases, and has been read and corrected by one of the physicians of a cholera hospital of Vienna. The first symptoms may be regarded as those of the access: they are a sense of uneasiness and oppression, coldness of the extremities, headache, nausea. These symptoms rapidly increase in force, and usher in what may be considered as a cold stage, or stage of prostration. The patient suffers a marked chill or rigor. The headache increases rapidly, as does the nausea. The extremities become icy cold to the patient, and to the touch of the observer. The expression of the face becomes altered, the eyes become glassy, and a deep bluish black ring surrounds the orbits. The conjunctiva becomes injected with red blood; complexion of the face fuliginous, lips almost black. Noise is heard in the ears. The patient generally lays on his back, with the eyes half closed and turned up. The surface of the mucous membrane of the eyes, and of the mouth covered with a viscid mucus which gives the glassy look to the eyes, and the moist, slimy appearance to the membrane of the mouth. Tongue charged with a brown or brownish white coat. The patient has his intelligence, and when roused tries to speak, but the voice is extremely feeble, and great exertion appears requisite to utter a low whisper. In old persons there is often complete aphonia. Halitus cold. Respiration slow, irregular and laborious; sometimes is arrested for a minute, and then a full and painful elevation of the thorax follows. Sense of anxiety very great; sense of oppression at the epigastrium, often augmented by pressure. The skin over the whole surface of the body becomes more

and more blue, which augments in intensity most at the extremities, the skin of which becomes wrinkled, particularly on the palmar face of the fingers at their extremities, they are often of a purple tint, and cold as ice to the touch. The pulse varies ; is generally small, thready and irregular in the beginning of the cold stage, and becomes almost if not quite extinct during the intensity of the blue, insensible, or powerless state. In violent cases, the pulsation of the heart is with difficulty perceived by the touch — but with the stethoscope is found still to have some force, contracting very irregularly, and intermitting its action. Cramps in the legs, beginning in the gastronemic muscles, and extending to the other parts of the body.

The secretions are generally suspended, particularly that of urine, which in violent cases is always wanting.

Vomiting and diarrhœa take place. The matter vomited is a thin opaque liquid, like rice water, containing flocculi of a white substance resembling little fragments of false membrane. The quantity of liquid evacuated varies with the gravity of the case, sometimes it is enormous. I have often seen it amount to thirty or forty pounds in the course of two or three hours vomiting. This liquid has a peculiar odor, resembling that of burnt lac. I at first supposed it to arise from the matter, used in the treatment, but afterwards found this odor to be common let the treatment be what it might. The liquid evacuated by stool is colored of a yellowish or greenish hue, by fœcal matter and bile. It is sometimes precisely like that vomited, a turbid liquid like rice water. This liquid is sometimes colored of a delicate pink, probably arising from extravasation of the red globules of blood on the mucous membranes of the stomach and intestines. Towards the fatal close of cholera, the fluid evacuated by vomiting, becomes of a brown color. The cramps being violent and spasmodic, contractions of the muscles take place ; and singultus precedes death. Before this fatal termination the patient becoms still and tranquil, the warmth of the surface returns, and the skin is covered with a clammy moisture ; the face has now the hippocratic cast, and death soon closes the scene.

The duration of the disease is from three to twentyfour hours — sometimes it is protracted to many days, but the cold and purple state of the body generally give way before that time, and the disease passes into another state, the stage of reaction, or falls from that into the typhoid or adynamic state. In this state the patient may remain an indefinite period, recover slowly, or sink and die with delirium or coma.

The cholera rarely terminates in spontaneous cure, but I have nevertheless seen one instance in which the patient was left entirely to nature, and recovered. This patient, attacked in a slighter degree than many others I had seen, had his intelligence unimpaired, and was able to converse with the bystanders. He was a soldier, aged twentyfour, of a good natural constitution, and not addicted to intemperance. Conceiving the vulgar idea that the doctors were poisoning the people, he refused to take medicine, and was in consequence left to himself. I considered it a good opportunity of seeing the phenomena of cholera untreated, and watched him closely. The diarrhœa continued for some time, and he suffered from intense cramps. The stage of reaction came on, and he passed by degrees through a slightly marked hot stage, into the adynamic or typhoid state, from which he eventually recovered at the end of three weeks' sickness. His diet had always been a soup made for the choleric patients, containing but a small quantity of gelatine.

The treatment of cholera has been the subject of a great deal of discussion and a vast number of experiments. I shall describe the practice of the Vienna physicians, and the results of the experiments I witnessed. At first, from the theory that the disease consisted in a state of spasm, antispasmodics were had recourse to — such as musk, assafœtida, camphor, opium and the subnitrate of bismuth. The signal failure of this practice soon caused it to be generally abandoned. Calomel in various doses was tried, but with no better results. Venesection was tried, but in the intensity of the cold stage but little blood could be obtained, and the mortality in this section did not fall short of the others. Local blood-letting was often beneficial when there was an attempt in the system to take on the stage of reaction, and it appeared to aid the process. Quinine, cannella, and various tonics, were used without benefit. Diffusible stimuli, such as ammonia, alcohol, &c, were often useful in bringing on reaction in cases where the circulation was nearly suspended. Phosphoric acid used as a powerful stimulus did not have any decided action. Cajeput oil, acting as a diffusible stimulus, was sometimes useful. External and internal application of ice, acting as a sudden stimulus, like the application of hot cloths to the epigastrium, and the administration of hot drinks was useful in bringing on reaction. I have often seen the circulation reëstablished by these apparently opposite means in cases where the pulse was entirely extinct. Cold affusion I saw once tried as a last resort, but the case proved fatal.

At length one of the physicians of the military hospital, reflecting on his practice in the plague, resolved to try the means he had often found successful in that disease, in cholera. This treatment consisted in the administration of emetic doses of ipecacuanha in the beginning of the cold stage. This medicine was given in doses of ten grains every ten minutes until vomiting was produced — warm water and irritation of the fauces were also used to bring on this artificial vomiting as soon as possible. The effects of this apparently paradoxical treatment were surprising, and its success exceeded even the most sanguine anticipations of the physician who first thought of this remedy. Eighteen individuals in the cold and blue stage of cholera were treated by the means above noticed; two died in the cold stage and two or three sunk in the typhoid stage. The success of this experiment drew the attention of all the physicians of Vienna to the use of ipecacuanha, and the mortality of cholera began rapidly to diminish. The changes effected by this treatment, are as follows: — The first effects of artificial vomiting were marked by a determination of blood to the surface. After a short time the patient sank as if exhausted by his efforts to vomit. The complexion of the skin now changed, the fuliginous tint of the face gave way to a feverish flush — the sunken appearance of the eyes, and the black rim about them, gradually disappeared. The whole surface became excited as in inflammatory diseases, and was burning hot. The patient now frequently complained of pains in the stomach and bowels, and there was often pain augmented by pressure at the epigastrium. The feverish heat soon gave way to a copious perspiration. The secretion of urine took place, and usually in abundance. This was regarded as critical and certainly was one of the most favorable symptoms.

We could not help expressing our astonishment at the results we had seen by this mode of treatment. The sudden changes effected by the ipecacuanha were indeed remarkable. The patients were affected so suddenly by it that it seemed to be a sort of enchantment. The *modus operandi* is I suppose the same as it is when emetic medicines are used to break up the excess of other fevers, as we have long been able to prove in our every day practice at home.

I shall not take up your time in discussing the manner in which this medicine operates. I have only undertaken to give you a faithful account of the practice I had an opportunity of witnessing at Vienna. Should I undertake to examine critically every interesting phenomenon I should write a volume. My pretensions are of a more humble nature.

Before I leave the subject of treatment of cholera, I should remark that it is all important that not a moment be lost. The disease yields much more readily in its early stages, and the most simple and often quite opposite methods of practice are successful. Time is of more value, than the nature of our medicine. Treated in its access, the cholera is very easily arrested. The administration of warm infusions of camomile or common tea, are often sufficient to arrest the morbid action. Injections of warm liquids *per anum* are very useful. Should there be any tendency to diarrhœa, it should be arrested by opiate injections and the strictest diet. Demulcents should be used for some days after the diappearance of the first symptoms of the cholera. Topical bleeding in case there exists any gastric or enteric inflammation. The strictest temperance should always be observed ; these few rules being observed, there will be but little danger of falling a victim to this terrible disease. Physicians should hold themselves in readiness to administer their remedies, and not wait for the apothecary to prepare his prescriptions. He should carry in his pocket the most essential remedies required. When the cholera is not attacked in its onset it becomes almost impossible to cure. The patient is now to appearance a lifeless corpse ; an occasional painful respiration is the only external sign of life. His limbs are cold, blue, and his muscles are firmly contracted as from some terrible convulsive malady. This semblance to death is but too often its immediate forerunner. It is in this stage the disease generally proves fatal. Once roused from this state of general asphyxia, if I may be allowed the expression, the patient is comparatively safe. We are then to use stimulants to excite the dormant circulation ; these stimulants may be both external and internal, such as cloths wrung out in hot water, applied to the præcordia, and to the feet frictions with hot cloths, &c. Internally, hot spirituous potions may be used, or hot tea in some cases. The ipecacuanha should be administered as soon as the patient gives signs of revival. The circulation being now restored, the emetic will be absorbed and take effect, whereas, if given at the period of extreme prostration, it would do no good, remaining an inert mass in the stomach. When the symptoms of reaction run too high, we should let blood according to the state of the patient. Topical bleedings are preferable in the epigastrian region, when there is pain in the stomach, and to the temples when there exists a determination to the brain. If the patient does not recover by a favorable close of the hot stage, he falls into a typhoid state in

which we should use topical bleeding when there is any local congestion, and tonics where there is evident debility, marked by the slow and feeble state of the circulation. A vinous infusion of canella bark was used with benefit at Vienna as a tonic in this stage. When there is great thirst, ice and lemonade are grateful and refreshing to the patient. The treatment varies with the symptoms of individuals and will easily be applied by a practitioner.

I shall now pass to the phenomena offered by dissections of the dead. These dissections were made with due care and with great minuteness. There is a professorship of pathological anatomy at Vienna ably filled by Dr Wagner. His sole duty consists in examining the dead and reporting exactly the state of the bodies submitted to his inspection. He does not attend the sick and consequently could not be influenced by any bias in his pathology. I made a great number of dissections with this professor, and shall always remember the skill, talent and minute accuracy for which this accomplished anatomist is remarkable; as well as the gentlemanly urbanity of the professor's manners, and the kindness with which he received foreign physicians. The Germans are remarkable for the methodical arrangement of their studies. I observed this peculiarity in the manner in which they make their dissections. They examine the body before them as naturalists would a new species, and note every peculiarity observable. They begin always with the surface of the body; examine every little eruption that may exist on the skin, — note the precise thickness of the adipose tissue, the state of the muscles, &c. The digestive organs come next; and they are as closely examined from the mouth to the anus. Then come the organs of circulation and those of respiration, and lastly the brain and nervous system, which they examine with special care, always opening the spinal canals and disclosing the whole extent of the medulla. The mazes of the solar plexus are likewise threaded, and the exact state of the ganglions described. This precision gives often a tedious length to the reports, but is exceedingly precious to the student of morbid anatomy. I shall endeavor to lay before you, as briefly as possible, the general results of our dissections of the choleric subjects. The surface of the body is always remarkable, as we can distinguish a person dead of this disease at a glance from the state of the skin and muscles.

When we examine a corpse dead of cholera, we remark a livid purple or blue color of the skin over the whole surface of the body, but more strongly marked at the extremities; the

skin of the fingers on the palmar face is wrinkled, and the tips of the fingers and toes have deep furrows within, produced by this means. The eyes are deeply sunken, and have a dark bluish black ring around the orbits. The conjunctiva is congested with blood and has a glassy lustre — the flexor muscles are rigidly contracted, the tendons standing out prominent on the extremities; the hands are firmly clenched, requiring an effort to open them. Tongue covered with a brown slimy coat; mucous membrane of the mouth covered with an adhesive mucus — urnla tonsils and pharynx covered with granulations, as is likewise the base of the tongue. These granulations vary in size from that of a pepper corn to that of a pea, and are probably the mucous follicles altered by inflammation. They contain a yellow pus of more than ordinary consistence. Œsophagus corrugated. Mucous membrane of the stomach, often thickened, and is of a delicate pink color, or is brownish yellow, with spots of redness, as if from recent inflammation. These red spots have often little rounded vesicles of the shape and size of half a pea, projecting from the centre, these contain a liquid pus. We noticed the presence of vesicles in three instances in the stomach, where we first discovered them. Afterwards we found them very common in the whole track of the small intestines, but did not find them so frequently in the stomach. These vesicles are probably mucous follicles altered by inflammatory action. Stomach and intestines are filled with a turbid liquid like rice water, with little flocculi of a white membranous substance floating in it. The fluid in the intestines is colored more or less by fœcal matter and bile.

The glands of Peyer are enlarged in cases where the disease has been protracted into the typhoid state. The glands of Brenner are often in these cases rendered visible, are large as peppercorns and have black points at their centres. Valvulæ conniventes of the duodenum flaccid, thickened and swollen — covered with the little vesicles before mentioned — more rarely they are ulcerated. Peritoneum dry, adhesive to the touch, and has a shining opaline lustre. The bile ducts are often thickened, but are generally open. Liver dry; gall bladder filled with a brownish liquid bile. Spleen small, flaccid. Heart large, flaccid, soft, easily torn by the fingers — contains blood in all its cavities. The blood is imperfectly coagulated, resembling thick molasses. It adheres to the surface of the heart and gives it a dark color. The blood is black, or venous blood in both ventricles and auricles. The *pulmonary veins contain clots of yellow coagulated lymph*, tremulous like *jelly*.

Mr Wagner considers this a peculiar phenomenon. The state of the blood is like that I have observed in persons dead of diabetes mellitus. Is it not the effect of a drain of serum from the blood during the vomiting in cholera, and by urine in diabetes ?

In the organs of respiration we find the trachea containing frothy mucus of a brown color. Vocal cords of the larynx flaccid, sometimes thickened. Mucous membrane of larynx sometimes red and congested. Lungs somewhat contracted in volume, are tough and leathery to the feel, but *crepitate well* and *never contain tubercles.* Kidneys have the veins full of uncoagulated blood. Bladder firmly contracted in a small mass beneath the pubes. It is generally empty, or contains a ʒ of opaque liquid. Brain has the sinuses engorged with uncoagulated black blood. The cerebral mass firm, tough and dry. In cases where the disease was of a long duration before death, we found the brain congested. This was peculiar to the typhoid state. Medulla oblongata firmer than ordinary, and contracted in volume. Medulla spinalis congested with blood from gravitation after death. Semilunar ganglion was found sometimes enlarged, of a deep red color, and sometimes softer than natural ; the state of this ganglion, however, varied so much that I can give no precise account of its morbid anatomy. It is obvious the changes of color in this ganglion might have been the effects of the change in the color of the blood. But little is known of the morbid anatomy of the ganglionic nerves, and we have no data on which to found our comparisons — hence it is difficult to say what part their lesion might have performed in the cholera.

We examined twenty or thirty corpses of persons dead of cholera, during my stay in Vienna, and the above morbid appearances are generalized from the whole number. I have carefully compared the facts with those collected by my friends at Vienna, and find that we are generally of accord.

The result of this investigation will prove to your satisfaction, I have no doubt, that the disease has its seat in the digestive organs. I do not believe, nevertheless, we are to consider it the result of common inflammation. It differs as much from ordinary gastritis or enteritis, as small pox differs from an inflammation of the skin caused by mechanical irritation. Perhaps you will decide that the cholera is a morbid action, like intermittent and some other fevers, fixing itself sometimes on one organ, sometimes on another, according to circumstances. I only insist that it has its principal seat in the digestive organs, as we al-

most always find some lesion in their membranes. The manner in which the disease comes on, favors this idea. We are at a loss to account for the sudden alteration in the blood, and the rapid extravasation of the serum into the intestinal tube. Various theories have been proposed, but I forbear troubling you with them, as I have neither time nor room for an examination of their several merits.

The cramps are very remarkable, and are difficult to account for. One of my friends in Vienna proposed the following theory, which is ingenious, but has some heavy facts in its way which it cannot surmount nor remove. This theory is, in a few words, the following: — There is an irritation in the alimentary canal, a determination of blood takes place to those parts, a separation of the serum takes place by infiltration through the coats of the vessels, or from their mouths. The blood by degrees becomes more and more dense, and presently is too thick to circulate in the small vessels, hence they become crowded with blood which accumulates at each moment, the nervous system now becomes oppressed, violent convulsive action takes place to free itself from pressure of blood; hence the spasmodic action and cramps. The blueness of the skin is caused in like manner by the congestion of the small vessels with dark blood which cannot make its way to the lungs to become decarbonated.

Cholera, according to this theory, is nothing more than a slow asphyxia, dependent entirely on mechanical, physical and chemical changes. The objections are, that in case this congestion of the nervous system was taking place, why does not the patient lose his consciousness in the blue stage — is not the brain particularly exposed to congestions of blood? But the most unfortunate fact for this ingenious theory is, that cramp often precedes the diarrhœa and vomiting; *i. e.* before the supposed drain of serum could have taken place.

Among other strange notions, one physician advanced that the cholera was owing to a reversion in the polarity of animal magnetism, and even went so far as to say that the magnetic force of the earth was gradually diminishing. If that be true, according to his theory we shall have an augmentation of cholera *ad infinitum*.

A TABULAR VIEW

Of the state of the Cholera Morbus in Vienna, with a Meteorological Table, from the 9th of September, to the 10th of October. Extracted from the Vienna Zeitung and other papers.

Sick.	Cured.	Died.	Remaining.	Sum total of sick.	Sept. 1831.	Thermometer of Reaumur.	Wind.	Weather, state of the heavens, &c.
					9th	8 10,4	S. E. moderate.	
						3 19,2	S. S. E. strong.	Cloudy all day.
						10 14,0	E. S. E. moderate.	
					10th	8 13,4	W. Moderate all	Obscure.
						3 9,8		Rain.
						10 7,8	day.	Rain.
					11th	8 8,0	W. moderate.	
						3 12,0	ib.	Rain all day.
						10 8,0	W. strong.	
					12th	8 8,0	W. stormy.	
						3 9,0	W. stormy.	Very rainy and stormy all day.
						10 7,8	W. violent gale.	
					13th	8 10,8	W. moderate.	Rain.
						3 11,7	W. N. W. strong.	Rain.
						10 8,0	W. N.W. violent.	Obscure.
41	10	30	30	41	14th	8 7,5	N. W. moderate.	
						3 11,0		Cloudy.
						10 7,5	Still.	
						8 7,2		Obscure.
139	1	74	74	180	15th	3 12,7	N. W. moderate.	
						10 8,0		Serene in evening.
						8 8,0		
127	3	18	170	230	16th	3 12,5	S. W. moderate.	Cloudy.
						10 8,0		
						8 8,5		
111	7	36	238	357	17th	3 11,8	N. W. moderate.	Obscure.
						10 7,5		
						8 8,0	W. moderate.	
130	7	59	302	468	18th	3 12,0		Obscure.
						10 7,8	Still.	

117	17	41	361	598	19th	8 3 10	8,8 14,8 8,2	Still.	Obscure all day.
99	11	35	414	715	20th	8 3 10	7,0 16,4 9,7		Cloudy all day. Rain in the evening.
76	17	24	449	814	21st	8 3 10	8,5 14,0 7,4	Still.	Very cloudy. Rain in evening.
60	35	22	452	890	2 2d	8 3 10	6,8 14,0 8,0	very moderate	Cloudy. Obscure. Serene.
74	35	18	473	950	23d	8 3 10	9,0 14,2 8,2	still	Serene. Day cloudy. Obscure.
65	71	19	448	1024	24th	8 3 10	9,0 14,5 8,8	strong wind	Obscure.
56	14	16	474	1089	25th	8 3 10	9,2 15,3 9,5	violent wind	Serene.
50	41	23	460	1145	26th	8 3 10	8,0 16,9 10,5	N. E. light.	Serene.
61	39	36	446	1206	27th	8 3 10	11,0 17,5 10,0	no wind	Cloudy in morning. West. horizon colored red by set. sun. Serene in evening.
44	33	22	435	1250	28th	8 3 10	10,8 13,8 11,2	still	Serene in morning. Obscure; slight rain. Obscure.
65	28	28	444	1315	29th	8 3 10	12,0 19,2 12,5	still	Morning cloudy. Day serene. Warm and pleasant.
45	14	83	442	1360	30th	8 3 10	10,2 15,5 11,0		Morning very cloudy. Clear at noon. Serene in evening.

	Sick.	Cured.	Died.	Remaining.	Sum total of sick.	Oct.	Thermometer of Reumur.	Wind.	Weather.
	65	32	37	438	1425	Oct. 1st.	8 10,5 3 15,4 10 12,5		Morning very cloudy. Rain. Serene, foggy.
	53	13	28	450	1478	2d.	8 10,5 3 17,8 10 12,3		Dense clouds in morning. Noon serene, warm. Evening pleasant.
	56	40	28	438	1534	3d.	8 14,0 3 16,4 10 13,8		Morning cloudy, wind. Noon obscure, foggy. Evening rainy.
	63	24	24	453	1597	4th	8 10,0 3 13,8 10 10,5	W.	Rain. Day obscure. Showers of rain.
In city,	7 —=55	5 —=80	0 —=26	228 —=462	921 —=1652	5th	8 11,2 3 15,0	calm	Morning still, serene.
faubourg,	48	15	26	232	731		10 10,8		
c.	3 —=75	9 —=81	3 —=35	219 —=462	1727	6th	8 9,5 3 15,0		
f.	73	12	32	262			10 12,5		
c.	9 —=77	43 —=83	3 —=39	182 —=436	1804	7th	8 10,0 3 15,5		
f.	68	40	36	254			10 12,0		
c.	6 —=78	30 —=78	—=39	158 —=397	1882	8th	8 10,0 3 14,8		
f.	72	48	39	239			10 9,0		
c.	11 —=72	32 —=59	3 —=44	134 —=366	1954	9th	8 9,0 3 14,5		
f.	61	27	41	232			10 10,5		
c.	10 —=73	26 —=52	6 —=43	112 —=342	2027	10th			
f.	63	26	39	230					
c.	10 —=84		40			11th			
f.	74								

Art. III. — Obituary Notice of the late Dr Thomas Phipps, of Quincy, with the Appearances on Dissection of his Body.

By E. Woodward, M. D.

The late Dr Phipps was the son of Dr Thomas Phipps, who was graduated at Harvard University in 1757, and entered upon the practice of medicine in this place, then a part of Braintree, in the year 1768, and continued an eminent physician in his adopted town until his death, at the advanced age of seventynine. Having given a collegiate education to his eldest son, and losing him by an early death, he concluded to bring up his second son for the profession of medicine by giving him a practical education under his own eye, without extending to him the benefit of a classical one. In consequence of this conclusion, the late Dr Phipps was early initiated into the practical part of his profession, and at an age, when most young men begin to think of commencing the study of a profession, he might have been considered an established practitioner. He continued, however, for many years after this to enjoy the advantages of his father's advice, which no doubt contributed much to that celebrity in the practice of midwifery, which he continued to possess until his death, and which his father had so extensively possessed before him. The late Dr Phipps enjoyed a large and lucrative practice in his immediate vicinity.

He was peculiarly prompt and energetic in his practice, and remarkably attentive to his patients, gaining their affection and esteem. He was not only their physician, but their friend. While he enjoyed good health, he spared not himself when called upon by his patients by day or by night. Dr Phipps was remarkable for his social qualities; was always cheerful, and looked on the bright rather than on the dark side of an object presented to his view. The possession of these qualities led him never to despair of his patients, until life was extinct.

He had enjoyed robust health until about three years ago; when, in the month of June he called upon me to assist him in a post-mortem examination; I observed him to be very hoarse. He went, however, the next day but one to the city, to the annual meeting of the Massachusetts Medical Society, of which he was a member. On his return in the morning, he complained of head-ache, and was bled, which removed the symptoms for a time. In the course of three or four weeks he met me in the street, and said that he had suddenly, that morning, rais-

ed a little blood, at which time he was again bled. He continued to have turns of raising blood every three or four weeks during the summer ; at which times he was always bled, but continued his practice night and day without intermission ; although the propriety of relinquishing it was urged upon him. He still thought his complaint slight, and frequently said that he was recovering, until another eruption of blood, attended with acceleration of pulse, compelled him to retire from the active duties of his profession. He then sought the advice of Dr Jackson, who pronounced his disease to be subacute inflammation of the lungs, and recommended his removal to a southern clime. With his usual promptitude he concluded to spend the winter in St Augustine. He did so, and returned in the spring, all the way from Charleston on horseback ; and arrived at his native place, June 20, 1830, in much improved health. He immediately commenced the practice of his profession with increased reputation, and continued to devote himself to it at all hours, until August 30, 1832, when, about three o'clock in the afternoon, he started from his house to attend some business, and, as he thought in good health, having the day previous attended the public exercises at Cambridge, he suddenly fell dead a few rods from his own door, at the early age of fortyseven. The only symptom of ill health, which Dr P. has complained of for a year past, was a slight difficulty of breathing in walking fast for a great distance. The post-mortem examination was conducted by Drs Spooner and Ware of Milton, and myself. On raising the sternum, where Dr P. had often mentioned that he supposed adhesion existed, we found none. The right lung, at its superior part, adhered to the back part of the pleura next to the spine, and was indurated about one third down, having two small abscesses in the indurated part, which had no communication with the bronchia ; the remainder of the lungs on both sides was sound. The heart was rather large, but had not the appearance of a diseased heart, with the exception of the semilunar valves of the aorta, which were found to be in a state of induration with commencing points of ossification, and there was also an incurvation of the valves with an incipient contraction of the orifice. To this state of the semilunar valves of the aorta, the gentlemen present were disposed to attribute the sudden death of the subject. But, that it should have occurred at that moment, is certainly, rather a singular phenomenon, unless we conclude, that the Doctor was much fatigued with the duties of the preceding day, and that by some sudden movement the heart was oppressed with

blood, and its action paralyzed. The diseased part of the heart has been preserved, and will be presented to some of the anatomical museums. In the abdomen there was nothing unnatural, with the exception of some slight irritation of the mucous membrane of the intestines. There was an appearance of a tumor externally, and which had been noticed by the Doctor while alive, with a request to have it examined after his death, but which entirely disappeared upon cutting the abdominal muscles, and probably depended upon an increase in thickness of those muscles. Having no suspicion of any disease in the head it was not examined.

Quincy, September 7, 1832.

Art. IV.—Case of Emphysema Uteri.

By Dr Ray, Eastport, Maine.

The subject of this case is forty years old, has borne ten children, and when first under notice, was advanced into the fifth month of her tenth and last pregnancy. She was suffering, as was usual for her in that situation, extreme pain in the whole uterine region, from which she never had received relief by medicine. Her complaint, she told me, had been attributed, by a physician to whom her case had been described some years before, to *wind in the womb*, and its history left no doubt of the correctness of his opinion. It first made its appearance about seventeen years ago while pregnant with her second child, though it was not till a long time after that she became acquainted with the true nature of her complaint. She was always sensible of the passage of wind from the vagina, but did not suspect there was anything unusual in this circumstance. From that time she never has been free from the disease, whether the uterus were in the impregnated state or not; only that while in the latter condition, it is a source of no inconvenience, in the former, it always has occasioned pain of the severest description. When not pregnant, she is merely conscious of the expulsion of air occasionally from the vagina, as often as two or three times a week, though its frequency varies at different times; and never has observed the air accumulate to such a degree as to prodnce any perceptible enlargement of the abdomen. Sometimes, though not always, the air was expelled with a distinct crepitus. When pregnant the air is less often ex-

pelled and becomes by its accumulation, she thinks, the source of pain. But it is not till after quickening that intense sufferings begin, and thenceforth it continues with little abatement till delivery gives her relief. She does not think that the disease has increased in severity with time, or suffered any material alteration. During her last pregnancy however, which was in 1831, she thought she experienced more pain than at any former period, and certainly, for four or five months, the sufferings of this poor woman were beyond description. Usually, about two P. M. she began to have lancinating pains in every part of the abdomen ; these gradually grew more sharp and frequent till the latter part of the evening, when they began to diminish, and about two or three A. M. they entirely left her. In the meanwhile, small tumors from the size of a walnut to that of a hen's egg, might be felt traversing the abdomen, under the skin, moving about and disappearing with considerable rapidity. When attempting to trace them, they might be followed for a moment and then would suddenly vanish from beneath the fingers. This was the invariable course of the disease from the time of quickening till delivery. How often wind is expelled during pregnancy, I cannot ascertain ; she merely states that it is far less frequent than when not in that situation. To alleviate the ferocious pain that she suffered, I gave her the acetate of morphia, and she thinks she could not have got along without it, though as it was, the long duration of pain and want of sleep, — for she seldom closed her eyes till the latter part of the night — made sad inroads upon her general health.

Her temperament is of the lymphatico-nervous kind and, until latterly, her health has been remarkably good. For the last four or five years, her digestive powers have been failing, and she has had more or less wind in the stomach and bowels, though previously, she is not aware that she suffered more from this cause, than others. Being advised at one time, to make use chiefly of an animal diet, she adopted this regimen during more than one pregnancy, but could not see that her complaint was at all affected.

COLLECTANEA.

Homœopathy.

This name has been given to a system of medical faith and practice about a quarter of a century old, which was instituted by Dr Hahnemann, now an aged German physician. He has lived to see his system grow into favor with a large portion of the respectable physicians of his own country and Italy, with the prospect at present that it will soon become a formidable rival to Broussaisism in France. Homœopathy and the 'physiological system' seem destined to be the prevailing medical sects of this generation, and they promise to divide pretty equally the allegiance of all those who are fond of contracting party attachments. We have hitherto heard much less of the German than of the French system in this country—indeed the former has hardly been noticed in this neighborhood, except for the extravagantly minute portions of medicines which it recommends. It claims however to be distinguished by much more important features than this, and in order to give our readers a brief account of its origin, progress and principles, we avail ourselves of what seems to be a very faithful notice of it, in some late numbers of the London Medical Gazette. E.

Dr Samuel Hahnemann is now in his seventyseventh year, in the healthy and vigorous exercise of all his faculties, and resident in the ducal town of Koethen, in the German States. Some of the chief incidents of his varied life may not be unworthy of a short recital. He was born at Messein, in Saxony, in the year 1755. At the age of twenty, with twenty ducats in his pocket, he went to Leipsic to obtain his education, and while there supported himself principally by the translation of English works on medicine. Two years after he attended the hospitals at Vienna, and gained the friendship of Dr de Quarin, physician in chief to the Hospital of Leopold. His stay, however, at Vienna was but short; for he was obliged, by reason of his straitened finances, to accept the place of medical attendant and librarian in the family of the Governor of Transylvania; and there he remained for some time, until he was enabled to repair to the university of Erlangen, where he took his doctor's degree.

After graduating, he does not seem to have settled in the practice of his profession for several years. His inquiring mind led him chiefly to the pursuits of chemistry and mineralogy: with the state of practical medicine he professed to be disgusted; and

rather, as it is said, than take it upon his conscience to live by an art so contradictory and empirical, he preferred to earn a livelihood by his old work of translation, and by contributing to the scientific journals of Germany. Nor was even this period of his life unattended by some fame: his researches on poisoning with arsenic, and the tests which he proposed for the medico-legal investigation of that subject, are still spoken of, and there is a preparation of mercury which bears his name.

It was in the year 1790 that the first germ of his doctrine was developed. While translating the Materia Medica of Cullen, the future homœopath was so little satisfied with the account which he found in that work of the febrifuge properties of the Peruvian bark, and the gratuitous hypotheses by which they were attempted to be explained, that he resolved to make experiments for himself, and on himself, with that substance. He now discovered, to his great surprise, that the proper action of cinchona on a healthy man is the production of an intermittent fever, very analogous to that which it most constantly cures; besides which it gives rise to a number of other symptoms never before noticed, as occasioned by its medicinal agency. This led him naturally to inquire, whether the virtue of the bark did not mainly reside in its effect of producing in the human system a disease like that which it removes; and whether other pathogenetic substances might not owe their virtues to the exercise of a similar power. Experiments in abundance followed, and Hahnemann and his friends thought themselves amply compensated by the result. Their second step, however, was with the reputed *specifics;* — the analogy between mercurial action and the symptoms of syphilis, and between scabies and the cutaneous eruptions produced by sulphur, were manifestly too obvious to be overlooked; and the general conclusions at which they arrived were these, — that our acquaintance with materia medica was only in its infancy; that all that was known about the efficacy of medicinal agents was the most prominent symptoms which they produced, and by which they were classed into their several varieties of emetics, purgatives, sudorifics, diuretics, and so forth, without sufficiently considering whether the said symptoms were not rather the effects of the reaction of the system, than the direct consequences of those ill-understood medicinal substances.

Hahnemann now duly respected himself as the founder of a system. Like the Count de St Simon, whom his valet awaked every morning with an admonition to be mindful of the great things which he had to perform that day, our great homœopath began to learn for what high destiny he was born; and the time soon came when he was prompted to declare, that his "was the great gift of God to man."

In employing his newly-discovered principle in the treatment of his patients (for he was now induced even to court practice

for the more complete development of his doctrines,) he adopted two peculiarities which are, perhaps, the most remarkable belonging to the homœopathic system. In the first place, he directed all his attention to *symptoms*, and them alone he contended with, neglecting altogether the received notions of proximate causes, and those accredited groups of ailments to which the current names of maladies were given. The second peculiarity regards the *doses* of his remedies ; and the extreme minuteness of these has almost made them proverbial. Two motives seem to have led Hahnemann to this singular scale of administering medicine. He considered in those his first essays, that he was about to exhibit a substance which would most probably in the first instance aggravate the complaint which he was about to remedy ; and then he reflected that he was about to produce a morbid action in a body already strongly predisposed. Both these motives, however, only led him a certain length in attaining that minuteness which is at present practised by the homœopaths ; the principle of it is professedly derived from what Hahnemann regards as his greatest and most original discovery — the almost incredible increase of virtue which is imparted to a medicinal substance by adequate trituration, agitation, and friction.*

It is easy to conceive what ridicule was immediately heaped upon this practice of tiny dosing : one facetious opponent compared it to setting a flea to draw a wagon fit for the draught of a team of oxen ; another demanding to know whether, if an ounce of salts were thrown into the Lake of Geneva, it would not be enough to physic all the Calvinists in Switzerland ? and so with the rest of the reasoners of this stamp. But, luckily for the homœopaths, it was perceived that a child could detect the flimsiness of those loose analogies, and this mode of opposition was, in consequence, soon pretty generally abandoned.

But to return to the personal history. It would fill far more room than we could spare to follow Hahnemann in his various movements from place to place. From Georgenthal (where he cured, with great eclat, a literary man who had been driven mad by an epigram of Kotzebue's) we may mention that he went to practise in Brunswick, in the year 1794 ; whence he removed to Kœnigslutter, where he first began to feel the effects of that jealousy and ill-treatment with which he had so long afterwards to contend.

The interests of pharmacy were undoubtedly at stake wherever

* The ingenious method by which he contrived to attain those almost infinitessimal doses may be briefly mentioned. A drop of a given vegetable juice, added to and mixed intimately with 99 of alcohol, gives a preparation of which every drop contains 1-100th of a drop of the juice. One of these latter, again, mixed with 99 of alcohol, carries the division to the 1-10,000, and so on. Sugar of milk, instead of alcohol, is used for dry substances ; and the same minuteness is arrived at by taking the grain for unity.

Hahnemann's principles were successful: but this could never justify the persecution with which he was but too frequently afflicted. He was obliged to change his residence from Kœnigslutter to Hamburgh, to Eilenburgh, and to Torgau, successively; and in this latter town, at length, he was enabled for a time to pursue his researches in peace.

It may probably be surmised that there must have been something essentially savoring of quackery in the early proceedings of Hahnemann: but there appears to be no real grounds for such a surmise. There is not, nor, so far as we can understand, ever was there, any quackery about the homœopathic doctrines — no secret or mystery in any part of them — no devices for mere money getting: those doctrines are, moreover, anything but a resource or refuge for ignorance; on the contrary, it is allowed that they require, for their successful employment, an unusually large stock of knowledge in physiology, pathology and all the subsidiary branches of medicine, including particularly an extraordinary degree of acquaintance with the substances constituting the materia medica; and, withal, a store of experience such as few of the ordinarily-educated would have patience to acquire. So far was Hahnemann from ever dreaming of making a secret of his doctrines, or any part of them, that he availed himself of every opportunity of making them public. In Hufeland's Journal he published several of his earliest cases and cures; and acquiring confidence as he proceeded, he was at length unfortunately betrayed into a tone of indignation and reprisal on his opponents, for which his friends have never since ceased to have been sorry.

The occurrence of scarlatina, in a severely epidemic form, in the year 1800, gave occasion for some new observations in furtherance of Hahnemann's doctrines. Belladonna was the remedy which his system pointed out, and which was actually found to be the most efficacious — at least, in his hands. But the founder of homœopathy did not stop here: he bethought him to try the effects of belladonna upon the healthy as a preservative against scarlatina; and experience is asserted to have completely verified the results which he expected. The homœopaths affirm, that no point has been more clearly established than this, their opponents having failed (whenever they did fail) simply from not properly following the directions of Dr Hahnemann, in the due preparation and minuteness of the doses. They moreover state, that the law is general with respect to the preservative efficacy of the articles in the homœopathic materia medica, — the vaccine virus itself being no more than one of the said articles.

At length the principles and practice of the homœopathic system were given to the world in a collected form: the *Organon fur die Heilkunst* was first published in 1810, has already gone through four German editions, and is translated into the French and Italian languages.

Hahnemann now went once more to live in Leipsic, and is said to have soon gathered round him crowds of pupils and patients. It is related that he made some most valuable converts belonging to the faculty, by curing them of diseases when all hope of recovery on the *allopath* system was at an end. Dr Necher, afterwards of Naples, was one of them; the Drs Aegidi and Petersen were also cured.

In 1811 the publication of his *Reine Arzneimittellehre* was commenced, — his Pure Materia Medica, — the most voluminous of his works, running to six volumes, and the last of which came out in 1821. In this production he was most materially assisted by some of his friends and many of his most zealous pupils. It is described as "rich arsenal, from which homœopathy may arm herself against every known disease: it contains at present nearly 80,000 combinations of symptoms, with the corresponding substances which shall produce their counterparts; and it goes on every day to be still further enriched, and to such an extent, as to leave it utterly impossible to assign any limits to the future developments of homœopathy."*

But what has been the Hahnemannian treatment in *chronic* cases all this time? It is admitted by the homœopath himself, that up to so late a period as 1816, those cases were his greatest stumbling block; and that he looked upon them as a class of affections in the highest degree *rebellious* against all principles drawn from his experience. We cannot enter here into a detail of all the facts and inferences by which he arrived at his present singular theory of chronic diseases, but we may mention simply the jet of it, which is, that the far greater part of those diseases are generated by a principle which he denominates the *psoric virus*, of which the *psora* itself is the simplest development. The treatment by which he has followed up this theory is said to be eminently successful, though many of his *antipsoric* remedies have certainly been deemed as little better than inert, in ordinary medical parlance, — such as silex, chalk, charcoal, sepia, and certain harmless vegetable powders. In 1828 the first volume of his work on Chronic Diseases was published, and the fourth in 1830.

For the last twelve years Hahnemann has been residing principally at Koethen, under the distinguished patronage of the reigning Duke: there he enjoys an extensive practice, with leisure to put a finishing hand to those works which have occupied the better portion of his long life.

The *Organon* of Dr Hahnemann commences with a sort of

* Bibilotheque Homœopathique, publiée à Genève, par un Sccieté des Médecins, No. 1, Avril—Mai, 1832. An interesting first number, to which we are indebted for several of the facts given above.

over mathematical precision : and we shall observe the systematic form of the consecutive dogmas.

1. The business of the physician is to cure the sick.

2. Three things are necessary thereto : 1. An exact investigation of the nature of the malady ; 2. To determine the agents which should be employed ; and 3. To employ them so skilfully as that health may be the result of their adoption.

3. Those medicinal agents are to be preferred which are at the same time easy, quick, and durable in their effects.

4. The object to which the physician's treatment is to be directed, is not anything occult or undiscoverable in the patient's system, but the *ensemble* of the perceptible changes which the malady has introduced ; in short, the totality of the symptoms.

5. What is called a malady, is made up of those occult and those obvious changes which occur in the system when out of health ; and that treatment which removes the latter, necessarily removes the former changes.

6. The true nature of medicaments can only be determined by the changes which they produce in the animal economy, and not by their physical or chemical effects.

7. From the employment of certain medicaments, the reëstablishment of health has sometimes so manifestly resulted, that it would seem vain to seek for a cause elsewhere ; and it is not strange that men should thence derive their conclusions relative to those substances, and be induced to employ them in like cases ; but this mode of proceeding is uncertain.

8. With the exception of a few maladies arising from miasms and certain viruses, every disease is an individuality which must be considered as new and peculiar : and a medicine that is found salutary in any one malady, cannot be employed in another merely resembling it ; the only way of ascertaining the true value of a remedy is by observing the development of its action on the healthy body.

9. Every medicinal substance applied to the animal economy produces in it certain organic changes ; it alters the condition of health, and gives rise to artificial disorders infinitely varied.

10. The development of the active powers of a medicament presents two very different results, according as it is applied to the body in sickness or in health : in the former it is curative, if the indication have been properly observed ; while in the latter it is pathogenetic, and only becomes remedial as it possesses that quality, namely, of producing disease.

11. Since diseases are only appreciable by their symptoms, and medicines by their pathogenetic qualities (or the perceptible changes which they produce in the healthy body) ; it follows that the general principle of the treatment of disease is founded in the re-

lations which exist between the symptoms and the pure effects of the remedies employed.

12. There can be but three possible relations of this sort, *heterogeneity*, *opposition* or *resemblance :* hence, severally, the *allopathic*, *antipathic*, and the *homœopathic* systems. Experience alone must determine their respective merits.

13. In the *allopathic* method, — the method most in vogue, — there are but three chances which are possible ; 1. That the maladies produced by the medicines may be *less* violent than the sufferings for which they are prescribed, — in which case no radical change is effected ; 2. That the morbific effects of the medicament are *equally* or *more strong* than the disease ; in which case the disease is suspended as long as the treatment lasts, — when it will most probably reappear, unless in the meantime it has run its natural course : and, 3. That the remedies if violent and long continued, as in chronic cases, give rise to complications of disorders, — whence there may come two or several maladies, having each a distinct place in the system.

14. *Allopathic* treatment cannot cure in any case : having no analogy, or opposing force, to the symptoms of the disease, it can never reach the parts affected : it may suspend the symptoms for a time by heterogeneous sufferings, but it cannot destroy them.

15. *Antipathic* treatment is merely palliative. When the action produced by the remedy employed, and which may seem to effect a neutralization of the symptoms or even a cure, ceases, the reverse process immediately takes place, — not only shall the primitive malady return, but come it will with aggravated symptoms, and in proportion to the doses administered.

16. This aggravation arises from the action of the system, which always has a tendency to present a condition exactly opposed to that which is attempted to be produced upon it, — consequently to react in the sense of the primitive disease, or to develope and aggravate the symptoms. As a palliative, however, the antipathic system is sometimes useful, nay necessary.

17. The *homœopathic* is the only one which experience proves to be always salutary. The pure and specific effects of the remedies employed being perfectly analogous to the natural symptoms, they go right to the parts affected ; and as two similar diseases cannot exist at the same time in the same system, the natural symptoms give way, provided the artificial ones slightly surpass them in intensity.

18. The artificial disease having only a duration limited by the action of the remedy, when it disappears, leaves the system perfectly sound ; and the more so, as the reaction of the system against the remedy is at the same time directed against the symptoms, and is as much conducive to the re-establishment of health, as on the antipathic plan it is opposed to it.

19. It is consistent both with experience and reason, that homœopathic relations between maladies and medicaments are the only ones that lead to prompt and permanent cure ; whence we derive the following precept : — "*Cure your sick by those remedies which are capable of producing, in the healthy body, effects as like as possible to the totality of the symptoms which you have to treat.*"

20. Homœopathic remedies, as they exert all their action upon the parts affected by the disease, had need to be given in doses infinitely minute : the action required for overcoming the intensity of the disease is extremely small, — a great one would be injurious, or even dangerous.

21. No more than one medicinal substance is to be employed at a time : a complication of medicaments is inadmissible, — for it is impossible to determine how, in those cases, the different ingredients modify each other ; and still more difficult to define the relations of the symptoms of the medicament with those of the malady.

22. It is the bounden duty of the physician to be sure that the remedies administered to his patient are of good quality, and in exact proportion : he should prepare them and exhibit them himself.

Such is the creed and confession of faith of every true Hahnemannian believer. But before we proceed to offer any observation on the preceding dogmas, we have something more to say, in addition to what we have said already in our former paper on the history of the Hahnemann principles. With regard, in the first place, to the origin of homœopathy, it is rather a curious fact that Hahnemann himself disclaims his having been the first to broach the system. The fundamental principle of exciting an ὁμοιον πυθος for therapeutic purposes, (whence the system derives its name,) he holds to have been acted upon even so early as the time of Hippocrates ; and among the proofs adduced in favor of this position, he mentions the cure (stated in the treatise of epidemics) of cholera by white hellebore. Senna for colic pains, rhubarb for diarrhœa, thorn apple for madness, and belladonna for hydrophobia, are other examples of ancient homœopathy : and descending to times more modern, the cure of the sweating sickness by sudorifics, the treatment of frozen limbs by rubbing the parts with snow, and of scalds and burns by exposure to the fire, are given as still more popular illustrations of prevalent ideas in behalf of the doctrine. It has been suggested that Shakspeare himself (that *omnia novit* personage) positively bears testimony to the truth of homœopathy, in those lines where he says,

> "Tut ! man, one fire burns out another's burning,
> One pain is lessened by another's anguish ;

Turn giddy, and be holp by backward turning ;
One desperate grief cures with another's languish
Take thou some new infection to thine eye,
And the rank poison of the old will die !"

But however this may be, Hahnemann, as we have said, by no means pretends to any discovery of the principle, *similia similibus curantur :* he only takes merit to himself — and no small share of it — for having organized into a regular medical constitution the materials which he found going afloat about the world, and for having seasoned, by the experience of thirty or forty years, the fabric which he first so ingeniously put together.

What the great Homœopath looks upon as his grand discovery is that of the powerful virtues evolved by medicinal substances consequent upon their minute subdivision. Of the singular extent to which he carries this principle, few physicians in this country can have any adequate idea ; and by those who are accustomed to limit their directions to a *Bene terantur*, or a bare *Misceantur simul*, the almost infinitessimal proceedings of the homœopaths can scarcely be contemplated without a smile. We have before us Hahnemann's letter on the treatment of cholera, written in August last, in which he prescribes no dose that exceeds two or three decillionths of a grain ; and the numerical expression for a decillion, some of our readers may not be angry with us for reminding them, is unity with sixty good cyphers annexed. As we mean to reserve the homœopathic treatment of cholera for a notice in another number, we shall exemplify the extraordinary mode of dosing on this system by a single case, reported by Dr Dufresne, in the *Bibliothèque Homœopathique*, of which that gentleman is the editor.

" A lady, about forty years of age, had suffered much from facial neuralgia ; and though, by the use of sulphate of quinine and opium, she obtained occasional intermissions, she could never enjoy anything like permanent ease. Dr Dufresne had been treating her on the allopathic system, and was almost in despair about the case, when he found in a medical journal a short account of the pathogenetic effects of strychnos nux vomica (the symptoms by the way, produced by which, according to the *Reine Arzeneimittel*, amount to about 1200) : he was, in short, induced to try that substance, and at the same time to put to the test the Hahnemannian principles, — for he was not yet a confirmed homœopath. ' It was the alcoholic tincture,' says he, ' that I should have employed by right, but it would have occupied me from six to eight days in the preparation, so I resolved to use the remedy in the dry state. I took a grain of strychnine, and triturated it with 100 of sugar of milk, then a grain of this compound with 100 more of the sugar, and so on till each grain of the ultimate compound contained a hundred-millionth of a

grain of strychnine. The latter dose was the one I administered to the patient. She was seized with a paroxysm of the neuralgia in the night, and about an hour earlier than the regular period of its attack. The usual symptoms were experienced, but it was remarkable that they occurred in an inverse order, attacking those parts last that were attacked first before. *The dose was much too strong.* Madame B. was like a mad woman all night; the racking pains seized her whole head, and her face was swollen, and burning hot. When I saw her, on being sent for at five in the morning, I was exceedingly surprised at the appearance she presented; her eyes were half closed with the swelling, and I could only compare them with those of a person stung by bees. My position was very embarrassing; but in the evening everything looked favorable, with a decided abatement of the swelling and pain. The night passed over without any recurrence of the tortures, and Madame B. rose in the morning refreshed, and in good spirits. There was but one slight accession of the complaint afterwards: the lady has ever since been perfectly well.'"

Dr Dufresne adds, with regard to the desperate *overdose* which he was rash enough to give in this case, that, had he to treat Madame B.'s malady over again, he would administer to her a decillionth of a drop of the alcoholic tincture. One does not well know what to make of those homœopathic cases. We made choice of the preceding, not because we thought it best, but because it was the shortest we could find, and might serve for a very tolerable specimen of the sort of "Facts" in which our Hahnemannians deal: we doubt, however, if the selection of more of them would at all serve their cause.

But to return to the dogmas. It is difficult to avoid the confession that there is much plausiblity about most of them: even in behalf of those which are most at variance with generally received opinions, something may be said. The homœopath, for example, holds, that in the totality of the symptoms, the whole of the disease exists; a position which the pure pathologist will never admit: yet the practitioner who has little time to devote to the fine theories of the schools, acts upon it every day, being fully content if he be only able to come at a full catalogue of his patient's aberrations from health. There are, however, certain diseases of which we know a good deal more than their symptoms — diseases in which their *causes* also are known; as when we recognise the presence of foreign substances, poison, or specific virus, in the human system: but for this we may see that there is an exception in the dogmas regularly made and provided.

Another striking assertion found among them is, that every new case is a distinctly new example of disease. But this of course follows, almost as a corollary to the dogma just noticed;

for if diseases be admitted to be no more than so many groups of symptoms, it must happen that there shall be as many varieties of diseases as of groups. That such a position must tend to the direct overthrow of all our systems of nosology, is to the homœopath a matter of pure indifference, or one rather of congratulation than regret. "He cannot help it," he will say; and he asks with an air of satisfaction, "whether the proofs of the earth's motion and of the sun's fixity were rejected on account of their tendency to overturn the established doctrines of the old astronomers?" And if it be complained that homœopathy has a sweeping propensity to level rather than to build up, its disciples are ready again in its defence, and point exultingly to the new science, of which they tell us it has laid the foundation — they allude to their *pathogenesy*. The merits of this, their new *science*, we cannot stay to examine; but the numerous volumes of their Pure Materia Medica sufficiently vouch for the ample extent of its details.

The reader, we suppose, has not failed to notice the very extraordinary assumption involved in the fifth dogma; anything more manifestly illogical, we candidly confess, we have not for a long time met with.

Spontaneous Human Combustion.

The fourth part of the Cyclopædia of Practical Medicine contains an essay by Dr Apjohn, presenting, in a very brief form, all that is known and most that has been conjectured on this curious subject. After detailing various instances of the phenomenon, he goes on to the philosophy of it as follows. E.

From the cases just related, and several others which might be quoted from the writings of Vic D'Azyr, Lecat, Lair, Kopp, Dupuytren, and Marc, it would appear fully proved that the human body is capable of being reduced to such a state as to undergo spontaneously, or upon the contact of flame, rapid changes analogous to those which may be effected by the agency of fire. A careful examination, also, of the histories of the several instances upon record, has enabled us to collect, at least with some probability, the circumstances which precede, accompany, and characterize this malady; for such it obviously must be considered. These we shall now enumerate, as they will serve as a guide to our inquiries respecting the immediate or proximate cause of the phenomenon.

1. Spontaneous combustion would appear to be a calamity almost peculiar to the old and feeble; for it has seldom occurred to persons of a robust constitution, or under sixty years of age.

2. Women seem particularly prone to it. Thus, of the seventeen cases collected by Kopp, sixteen occurred to females, while

the subjects of the eight cases mentioned by Lair are all of the same sex.

3. Individuals who have thus suffered have, generally speaking, been remarkable for the inactivity of their habits, for corpulency, or the opposite state, great emaciation, and for their inordinate use of spirituous liquors.

Of the circumstances which distinguish spontaneous from ordinary combustion, the following seem most deserving of notice.

1. The combustion spreads with extraordinary rapidity; the decomposition of the entire body being usually effected in an extremely short period of time.

2. The flame is of a lambent and flickering nature, of a blue color, very difficult to extinguish by water, and not readily communicable to inflammable bodies placed in its vicinity.

3. A strong empyreumatic odor is usually exhaled, and there is a fœtid and moist fuliginous deposit of a greasy nature.

4. The trunk is generally entirely consumed, but portions of the head and extremities are occasionally left uninjured.

Before examining the theories which have been advanced in explanation of spontaneous human combustion, it will be convenient to define in what *ordinary* combustion consists, and the conditions indispensable to its production. We shall thus be the better prepared to pronounce upon received hypotheses a correct and impartial judgment.

When any two forms of matter, whether they be simple or compound, combine chemically with the evolution of heat and light, combustion is said to have taken place. In order therefore to the production of these phenomena, the contact of at least, two dissimilar principles, having for each other a strong affinity is essential. Combustion may thus obviously result from the chemical action of a variety of principles; but, in all ordinary cases, one of the substances concerned is oxygen, and the other carbon, or hydrogen, or some compound of both these elements. If to these we add sulphur and phosphorus, which are associated with the preceding as component parts of animal bodies, we shall have enumerated all the elements with which we can have anything to do in our present discussion.

But the mere contact of oxygen with a combustible is seldom of itself sufficient to determine union, much less union with the development of heat and light. Carbon and sulphur may be encompassed by oxygen, and hydrogen mixed with it, without the occurrence of any chemical action; and though this is not true of phosphorus, the union of which with oxygen takes place at the usual temperature of the atmosphere, yet the process is slow, and visible flame is altogether wanting. These observations are equally applicable to the compounds which the combustibles form with each other, with a single exception. All of these but phosphuretted hydrogen, which inflames upon mere contact with

oxygen gas, require, in order to accension, the application of a somewhat elevated heat. Neglecting therefore, for a moment, this particular compound, it may be laid down that the conditions of ordinary combustion are two-fold.

1. That the combustible be in contact with oxygen.
2. That the temperature be considerably raised.
3. Now the human body is a combustible compound, and is constantly surrounded by an elastic medium, one-fifth of whose volume is pure oxygen gas. One of the conditions, therefore, necessary to combustion, is here fulfilled; and experience tells us that the co-existence of the other, that is, of a sufficient heat, will actually determine accension. But the human body, at least in a state of health, does not spontaneously take fire; and we also know that when heat is applied to any particular part of it, the mischief done is local, and does not extend to remote organs. In reference, therefore, to the subject of this article, two questions present themselves for solution.

First, whence arises that extreme degree of inflammability of the human body, in virtue of which its combustion is so readily produced, and, occurring at any one point, is propagated with rapidity to distant parts? And, secondly, how does the combustion commence — what is the origin of the first spark?

As to the cause of the preternatural combustibility of the human body, the opinion generally entertained is, that it is to be found in the alcoholic impregnation, which, as is alleged, invariably accompanies such a state. In support of this doctrine it is affirmed that individuals who die of intoxication emit at every point a strong smell of spirits; that the color of the flame afforded by the latter is precisely the same as that which has been observed in cases of spontaneous combustion; and, lastly, that all who have fallen victims to this calamity have been remarkable for the immoderate use of intoxicating liquors.

That the bodies of drunkards may become, as it were, soaked with alcohol, seems fully established by observation. Thus, Breschet found the different tissues of the bodies of criminals, opened shortly after their execution, to evolve a strong smell of eau-de-vie; and a similar observation has been made by Dumeril and Cuvier upon the body of a laborer, at the Garden of Plants, who died from the effects of a large quantity of wine, which he had drunk for a wager. Dr Marc also mentions the case of a shepherd of Laliowitz, addicted to excessive drinking, who during his last illness was constantly affected with eructations of an inflammable nature, and which emitted a strong alcoholic odor. Some indeed, adopting an ancient physiological dogma, that however the ingesta may vary, the chyle is always the same, deny the possibility of alcohol entering the circulation unaltered. It should, however, be recollected that many substances, such as the coloring matters of madder and rhubarb, and the odoriferous

parts of musk, camphor, and garlic, do certainly resist the assimilating powers of the digestive apparatus, and reappear unchanged in the secretions. Nor are such facts even opposed to the opinion to which allusion has just been made. These substances may enter the blood directly by the veins, which are now known to exercise the function of absorption, instead of reaching it through the circuitous route of the lacteals and thoracic duct.

But the theory of alcoholic impregnation is, *per se*, quite insufficient. When a healthy individual dies of intoxication, his body is found but little, if at all, more inflammable than if he had perished from any other cause; and if the flame of a candle be applied to an anatomical preparation just removed from the spirits in which it has been preserved, after the combustion of the alcohol has ceased, the surface of the preparation alone will be found burned.

From these considerations it appears pretty certain, that though the human body may to a certain extent become impregnated with alcoholic vapors, its combustibility will not, by this alone, be materially augmented; and, that, therefore, when a great tendency to combustion exists, it must be the result of some peculiar pathological state. In what this state consists, it is probably impossible with any accuracy to assert in the present state of our knowledge; but everything which we know upon the subject justifies us in inferring that the causes which produce it are such as have most influence in reducing the powers of life and enervating the system. Thus it occurs, as we have seen, almost exclusively to people advanced in years, and of constitutions broken down or enfeebled by intemperate habits.

A theory of preternatural human combustibility has been more recently advanced by Dr Marc, which appears better sustained by facts than that of alcoholic impregnation. This learned physician, who has apparently studied his subject with great attention, contends that the combustion is owing to inflammable gases which are, in such cases, developed throughout the system.

That inflammable gaseous products are usually present in the stomach and intestines, in health as well as in disease, is a fact well known to the physiologist; but it seems difficult to admit that these can be evolved in the different tissues during life; for such an opinion would appear to involve the possibility of the occurrence of some degree of spontaneous decomposition antecedent to death. There is, however, sufficient evidence that this has occasionally occurred. Besides the case of Father Bertholi already detailed, several others to this effect might be quoted. We shall, however, confine ourselves to the following, which is of recent date, and quite to the purpose.

A man ill for fourteen days with headache and colic pains, followed by an attack of diarrhœa, which lasted three days, was taken by M. Balley into the Hotel-Dieu. Upon entering the hos-

pital, his left thigh and scrotum were swollen, and his respiration was short and impeded: but he complained of nothing but weakness of the lower limbs. During a fit of delirium, which lasted a few minutes, he spoke of having been bitten by a dog in the leg; but upon examination no mark of any such injury could be found. He died on the night of the day on which he had been admitted in the hospital, and on examination eight hours after, exhibited the following appearances: — Blood had transuded from the thighs and trunk, and was also found, in a gelatinous state, in the nasal cavaties. The whole surface of the body was emphysematous, of a violet color, and studded with a vesicular eruption in detached spots, the vesicles being filled, some with a reddish serum and gas, others with gas alone, the latter being of a white color. The left leg and thigh were most swollen and puffy, and evidently contained fluid. The abdomen and scrotum were also much distended, the gas in the former occurring not within the intestines, but in the cavity of the peritoneum. The brain and spinal marrow were healthy, but the vessels of the pia mater contained air. Upon cutting into any emphysematous part, a gas escaped, which was set on fire by the flame of a candle; and from a perforation made in the abdomen a gas issued, which was ignited in a similar manner, and burned with a bluish flame.

This case, which was communicated to the Academie de Nationale de Médecine, excited a good deal of discussion. M. Bally considered it as illustrating Dr Marc's theory of spontaneous combustion. while others looked upon it as proving that the putrefactive process, from which alone they conceived the gases could be derived, may set in before death. This latter opinion may appear paradoxical, but it does not seem at all improbable, much less impossible that a spontaneous though limited decomposition may in certain states of the system take place in the living body. The elements of organized matter are, we know, combined, under the influence of vitality, into compounds very different from those which they would form if submitted to the sole agency of their mutual affinities. When released from the controlling influence of the vital powers, they enter into new arrangements; and it is but reasonable to expect that effects similar, at least in kind, may attend the diminution of those powers which is the consequence of disease, to those which are known to follow upon their extinction by death.

It is not, however, necessary, in order to account for the development of the gases, to resort to the hypothesis of putrefaction. They may be the products of depraved secretion; and this opinion seems even established by the many cases upon record of the cellular substance having become emphysematous without the occurrence of any external injury. In fact, spontaneous emphysema is at present recognised by all nosologists. (See the article Emphysema; also *Frank de Retentionibus*, and the articles *Em-*

physème and *Pneumatose*, in the Dictionnaire des Sciences Medicales.)

But though we admit, with Marc, that inflammable gases may be developed during life throughout the different textures, yet this will not explain the completeness of the incineration which has been observed to occur, nor the rapidity with which the combustion spreads over the whole body. If a taper be applied to carbureted hydrogen, it will burn merely at its point of contact with the oxygen of the atmosphere ; and to determine the instantaneous inflammation of a given volume of such gas, it must, previously to the application of the taper, be mixed with a certain quantity of oxygen. These facts, so familiar to the chemist, suggest a necessary modification of the hypothesis of Marc. The gases evolved cannot be all of an inflammable nature, but must include a proportion of oxygen, to act the part of a supporter. On this supposition they will constitute a species of explosive mixture, and we shall be enabled perfectly to comprehend the rapidity and extent of the destruction which must ensue from their accension.

It must, however, be admitted that, though oxygen may proceed from secretion, it is a gas not likely to be liberated by any process of spontaneous change, for it does not occur amongst the products of putrefaction. The views, therefore, which have been here advanced, must until confirmed or refuted by chemical analysis, be considered as chiefly recommended by their adequacy to explain phenomena.

Having attempted to account for the preternatural inflammability of the human body, we shall now direct our attention to the manner in which the combustion commences. In most of the recorded cases some ignited body, as a candle, fire, or lighted pipe, has been found in the immediate vicinity of those who have suffered. The consequence of this has been that some have attributed the origin of the combustion in every instance to an external cause. Such was the doctrine first taught by Vic D'Azyr, and since sanctioned by Lair, Breschet, Dupuytren, and others. Should it prove well founded, the epithet *spontaneous* will obviously cease to be applicable to human combustion.

Others, however, amongst whom may be mentioned Maffei, Lecat, Kopp, and Marc, conceived this theory inadequate to the explanation of all the cases with which they were acquainted, and to supply its deficiency, called in the calorific powers of the electric fluid.

That electricity, in the form of a spark, is attended with the disengagement of heat, and is capable of setting inflammable substances on fire, are facts which cannot be contested. But the source of the electric accumulation, in the cases under consideration, remains to be satisfactorily pointed out. And, indeed, it may be added, that the statements that have hitherto been made

upon the subject rest upon mere conjecture. Some conceive that certain persons possess the power of generating within themselves a state of electric tension, and quote relations of individuals who emitted sparks at the suggestion of the will. Dr Marc has adopted this improbable hyphothesis, and coupled with it one of his own, which appears equally destitute of foundation. The gases with which the body abounds in its combustible state sometimes become, according to him, ideo-electric, from an elevation of their temperature, whether produced by exercise, exposure to a fire, or any other cause; and hence proceeds the spark which determines their accension. Lastly, others conceive the spark when it occurs to be purely accidental, and to result from the electric fluid selecting the human body as a conductor in its passage to or from the earth. This latter supposition being the only one which in modern science is admissible, we arrive at the conclusion that electricity can scarcely have anything to do in producing human combustion.

It is believed by some that cases of genuine spontaneous combustion have taken place, or that the human body has sometimes taken fire, as it were, of its own accord, without the application of external heat, or the agency of electricity. Assuming such to be the fact, can any rational explanation of it be assigned? This is almost the only question of a theoretical nature connected with the subject of this article which remains to be discussed.

Of the elementary principles which enter into the composition of the human body, phosphorus must be reckoned as one of the most abundant. It exists, in very considerable quantity, as a constituent of bones, and, in many of the secretions, in the form of phosphoric acid, united to some base; and is also to be found, in a peculiar state of combination, in the cerebral mass, and in the fat which is deposited throughout the cellular tissue. When putrefaction occurs in the dead body, experience proves that phosphorus is evolved amongst the gaseous products in union with hydrogen; and there seems little reason to doubt that this is one of the gases which are occasionally generated throughout the different textures of the living system. Now, if this be admitted, as phosphuretted hydrogen inflames upon contact with the atmosphere, we shall have a perfect and simple solution of the difficulty of *spontaneous* combustion. This theory was very early advanced, and has been particularly insisted upon by Morelli and Fanzago, and more recently by Grabner Maraschin: (*Journal Complémentaire de Dictionnaire de Médecine.*) It is, however, passed over in silence by the majority of writers.

There is another mode of accounting for the spontaneous combustion of the human body, which is entitled to a brief notice here. The chemical actions which give rise to the inflammable gases of which we have so often spoken, are attended by the de-

velopment of heat; and when this rises beyond a certain point, combustion, it is alleged, must ensue.

In support of these views, the spontaneous firing of pyritic coal, heaps of charcoal, oatmeal, cotton and black wad soaked with oil, are appealed to. Whatever may be thought of this hypothesis, the records of medicine prove that the production of inordinate heat may be classed among the well established consequences of disease. In the Essay of Maraschin already quoted, three cases are detailed which will illustrate this position. We shall merely mention one which occurred, in 1822, to Balbiani, an Italian physician, and which was communicated by him to Morelli, Chemical Professor at Pisa.

A farmer, twentysix years of age, was seized, in the beginning of January, with an intermittent fever connected with gastric irritation. On the seventh day he felt in the throat a burning heat, ascending from the region of the stomach, so intense as to resemble the effects of the application to the body of red-hot coals. His breath, which smoked, could not be borne by the hand at the distance of two feet. He incessantly drank cold water, but with only temporary relief. The thirst was succeeded by a most voracious and insatiable appetite, the internal heat continuing unabated. He was treated by repeated immersions in the cold-bath, conjoined with the exhibition of draughts of iced water; and was finally cured perfectly.

From the preceding facts and arguments the following conclusions may be deduced: — 1. The human body admits of being reduced to a highly inflammable state. 2. This condition is chiefly owing to the development, by perverted secretion or incipient putrefaction, of gases constituting a more or less explosive mixture, but is probably often promoted by the dispersion throughout the system of alcoholic vapors. 3. In most instances of human combustion the process has commenced in consequence of the contact with the body of external fire, or of an electric spark. 4. Cases truly spontaneous, if any such have occurred, must be referred to the disengagement of phosphuretted hydrogen, or to the caloric developed by those internal actions which determine a highly combustible state of the body.

Before concluding this article, it will be proper briefly to advert to its medico-legal bearings. The human body, in a state of perfect health, may be consumed by accident or design, and it is obviously a matter of the first moment, with a view to the protection of innocence and the punishment of guilt, that we should be enabled to distinguish such cases from those in the consideration of which we have now been engaged. The importance of the study of spontaneous combustion under this point of view is usually illustrated, in works upon medical jurisprudence, by the celebrated case which occurred at Rheims in 1725. The wife

of a man of the name of Millet, who was much addicted to the use of spirituous drinks, left her husband's bed one night, and was found next morning, at a short distance from the kitchen fire, reduced to a heap of cinders. Millet, who was suspected of intriguing with a handsome servant-girl in the house, was accused of the murder of his wife, and being sentenced to death, was saved from execution by the report of a commission of medical men, who, after having investigated all the facts, declared it to be a case of spontaneous combustion.

By attending to the circumstances already enumerated as characterizing spontaneous combustion, we shall be in no danger of confounding it with that which may be produced by the ordinary artificial means. Thus, when the subject of the calamity is a female, advanced in years, and of intemperate habits; when the destruction has been very rapidly effected, and nothing remains unconsumed but portions of the head and extremities; when the room is filled with an offensive empyreumatic odor, and a moist and fœtid sooty matter is deposited upon the ashes which remain, and upon the walls and furniture; — these circumstances, or the greater number of them concurring, remove all doubt respecting the spontaneous origin of the fire. On the other hand, when the combustion is of the ordinary kind, and has been the result of accident, it will generally be but partial, and not directed in preference to any particular part of the body. In such cases, also, it will almost invariably be found to have extended to adjacent combustible substances. Lastly, when designedly produced, there will be evidence of the consumption of a large quantity of fuel.

As to the appropriate treatment of individuals who manifest a tendency to spontaneous combustion, nothing certain can be laid down: nor is our ignorance on this head much to be lamented, at least in a practical point of view; for such an affection is seldom announced by any precursory symptoms. Should, however, such a case as that which occurred to Balbiani be encountered, nothing appears more judicious than the treatment to which he resorted, namely, immersions in the cold bath, and copious draughts of cold water. Dr Swediaur, indeed, states that spontaneous combustion is very prevalent in the north of Europe, from the excessive use of eau-de-vie, and that the tendency to it, when detected, is with certainty removed by the adminstration of recently voided human urine. Upon this statement Fodéré observes, "*credat Judæus*," and we do not hesitate to avow that we participate fully in his scepticism.

Case of Cholera treated with Saline Injections, with Observations thereon.

[Communicated for the Medical Magazine, by J. Mauran, M. D.]

Providence, October 2, 1832.

Dear Sir, — The following brief sketch of a case of cholera, wherein the venous injections were employed advantageously, though not successfully, is communicated for your Journal, not because it presents anything strictly new with regard to the management of that fatal disease ; but from the belief that the profession should be duly apprized of every circumstance connected with its history, or which bears either favorably or unfavorably upon any plan of treatment which may have been suggested for its relief.

'Experientia docet,' and (in the absence of those indications strictly pathological which are unfolded in the phlegmasiæ and kindred ailments) probably no malady presents to the careful observer a field so ample for rigid experimental research as that now before us, of which, humiliating as the confession may be, we as yet know remedially comparatively nothing.

I was called on the morning of the 19th ultimo to a case of cholera in an adjoining town, which presented at the time of my first visit marks of great malignancy. The patient, a male, aged about 60, somewhat plethoric, and of habits rather irregular, had been affected with diarrhœa for ten or twelve days previously, and frequent, profuse characteristic evacuations, attended with cramps in the extremities, through the night. Exciting cause — excess in eating crude vegetables, (green corn and cucumbers) and country grapes — was now, eight hours from his immediate seizure, in a perfect state of collapse.

The usual indications were pursued, to restore reaction, viz. brisk frictions, primarily with hot mustard and dry flannels, and subsequently with the compound mercurial ointment of Roe to the extremities, mustard cataplasms to the epigastrium and chest, with the application to the surface of bottles of hot water, heated bricks, &c, &c ; and the internal administration hourly, of scruple doses of calomel combined with opiates pro re nata — and occasionally, cordial drinks.

This plan was followed energetically for five hours, when the respiration became more laborious, accompanied with great jactitation, and universal distress ; in fact "mortal anxiety" was fully developed. Under these circumstances, and with the decided conviction that a few minutes must inevitably close the scene, we determined to employ the venous injections, which were prepared according to the following formula, communicated to us by private letter from Dr Gale of the Crosby-street hospital, as used

there successfully in their first two cases, viz. Muriate of soda, ℥ ij. carbonate of soda ℥ i. distilled water which had been boiled and cooled down to 113°, ℔ vj. Dr Webb being in consultation assisted in the operation. The first injection was introduced into the median basilic from which the patient had been bled at a former visit. The result was most flattering. Scarcely two pounds had been thrown in, when the jactitation ceased, the respiration became free and easy, and the patient, looking up with a smile, exclaimed, "Doctor, you have now hit upon the remedy, this makes me feel better than anything you have yet done; I am now quite easy and free from all distress,—how warm and comfortable I feel!" The glow gradually returned to the previously livid and collapsed countenance, the animal spirits began to play, and the voice to resume its wonted tones. Five pounds of the liquid were injected in about thirty minutes.* Slight pulsation was now discoverable for the first time at the wrist. Stimulating frictions were again instituted, and he was given cordial drinks with carbon. Ammonia, and an enema of hot brandy and water. We now left him to visit another case of like character at a few rods distant and on our return, half an hour only having elapsed, we found that the pulse at the wrist had ceased — the livid, sunken features had returned; superadded, was general restlessness and anxiety, with coldness of the extremities, &c, in fact, perfect asphyxia, threatening immediate dissolution! *Seven* pounds of the liquor were now injected into a vein on the back of the left hand, (a place by the way, more convenient than at the branchial flexure) — the same favorable circumstances followed, though more marked than before, he again reclined with ease, (being now on the side;) jactitation ceased, and a genial warmth returned to the whole surface. Again he ejaculated, "I feel well — I shall *get* well," and called to one of the attendants very pleasantly to give him some wine and water; he in fact now replied rather jocosely and shrewdly to an observation that had fallen from one of his neighbors, a brother farmer who was giving *his* ideas of the disease and the manner that *he* should treat it, (eschewing all medical aid,) by placing the patient up to the chin in a pit in the earth which he knew would draw out the "pison" sooner than any other method. The pulse was now ninety, and perceptible at the wrist, extremities had become quite warm and drinks were quite readily taken, no evacuations either from the stomach or bowels having taken place for four hours past. An injection of hot brandy and water was administered, (those previously given having been first drawn off by the instrument, perfectly cold,) and moderately stimulating drinks ordered with a continuance (should the heat lessen,) of

* That apparatus was employed, a description of which has been heretofore transmitted for publication in your Journal.

stimulating frictions to the extremities. We now, an hour after the venous injections, retired, with an intention however of soon returning, but had not left the house for more than five minutes, when we were again summoned to the room with the dreaded intelligence that all was over — he died without a struggle. Although this case thus terminated, yet from the temporary relief afforded by the saline injections, I should not be deterred from, nay, I would recommend most earnestly under like circumstances of utter hopelessness from other remedies, resorting to that operation, which, when properly performed, (excluding totally the admission of air to the vessels) certainly, so far as experience has developed, possesses the power in most instances of protracting life or smoothing the rugged passage to the grave, and occasionally of arresting almost miraculously the onward march to death. J. Mauran.

P. S. Since the above was written, I have received a letter from my friend Dr Gale, giving the results of the venous infusions as performed at the Crosby-street hospital, in New York, from which it appears that *one tenth* was the average number saved. "And when it is considered," says Dr G., "that the experiment has not been made until no prospect presented from other means, we may say that with us *two* out of *twenty* have been saved when no hope was indulged from other remedies." Again he adds, "one individual in private practice was so suddenly prostrated that he could make no arrangement of his affairs, was experimented on and revived from a state of stupidity to one so comfortable that he was enabled to settle his affairs and lived more than thirty hours after the first operation was performed." J. M.

Cholera in Boston.

Our readers will recollect that in the last number, we reported four cases of the disease, which were all that had occurred here before the first of September.

Case V. was reported by the physicians of the Tremont-street hospital. A female vagrant, aged twentysix, was carried to the hospital, September 7th, in the morning. She was then pulseless, tongue, mouth and extremities cold, countenance livid, skin of the hands livid, contracted, and wet, fingers flexid, pupils contracted, slight spasms, — could answer questions rationally. Had been lately living at Newburyport, lodged night before last in Charlestown, and was found last night in the street in a state of intoxication, — was taken to the watch-house, where she had vomiting, purging and spasms. Physicians not called till morning, when she was sent to the hospital. She had been exercised with purging for several days before this. Venesection was at-

tempted, but without success. She had calomel and camphor internally, and hot applications to surface, but died about an hour after her entrance. The muscles continued to contract for an hour after her expiration.

Autopsy. Heart, aorta, and veins engorged with dark blood — blood coagulated in veins — small intestines distended, with the secretion, characteristic of the disease — mucous coat of jejunum and ileum had evident marks of inflammation, no fœcal odor, no urine; semilunar ganglion large, and of a deep red color.

Case VI. A young man, eighteen years old, by trade a painter, was carried to the Tremont-street hospital, September 10th, about three o'clock P. M. He lived at 77 Eliot-street, was of temperate habits, and good constitution. Was attacked with diarrhœa September 8th, took no medicine, and continued usual diet, which consisted of nothing peculiarly noxious. On the morning of the 10th went to work, but feeling ill, soon returned to his room, where he was seen by Dr Perry at eleven o'clock. Then had all the characteristic appearances and symptoms of cholera. A vein was opened, from which half an ounce of blood only could be obtained — had sinapisms to chest, abdomen and legs, and the following in a pill every ten minutes, Hyd. Submur. gr. ij. pulv. G. Camphor. gr. j. After he was carried into the hospital, another unsuccessful attempt was made to let blood. He was rubbed with stimulating applications, and surrounded with hot sand bags. Died at five P. M.

Autopsy. Large veins near heart distended with black blood, — stomach and intestines filled with rice water matter — mucous coat of jejunum and ileum inflamed, about four inches of the last very much so. No fœcal matter — bladder had about 3 i. of urine. Semilunar ganglion natural.

Case VII. An Irish laborer, three days before released from the House of Correction, where he had been confined as a common drunkard, was carried to the hospital half past one A. M. September 11th. Had had diarrhœa two days before. When received, had all the characteristic symptoms of the state of collapse. Vomiting and purging had ceased. Treatment consisted externally of hot applications, and sinapisms with friction; internally, calomel three grains, and camphor one in pill, every ten minutes. At four A. M. some reaction took place, but he fell off and died half past ten in the morning. He sickened at Blasland's yard in Essex-street.

Autopsy. Lungs somewhat gorged — blood in large veins near heart coagulated — stomach contained about a pint of fluid like gruel, with some pieces of potato undigested — small intestines contained fluid like stomach — mucous coat inflamed — bladder contracted, and without urine. Semilunar ganglion distinct and natural.

Case VIII. A respectable married woman, without children, aged thirty, living in Fessenden's court, awoke about three o'clock on the morning of September 11th, with an indefinite sensation of ill health. Slight nausea soon followed, and immediately after vomiting and purging. She was seen by Dr Watson at five o'clock, when she had had three dejections, said to have been of a bilious character. He found the skin, pulse, and countenance natural — no physical pain, but extreme anxiety of mind from a conviction that she was affected with cholera, and would become its victim. Said that she had enjoyed perfect health before this attack, but had been subjected to great fatigue and anxiety three days before, in rendering assistance both before and after death, in the case of a patient who died in an adjoining house, and whose complaint she believed to be cholera, although the physicians thought otherwise.

Calomel and opium were administered, and the patient remained quiet for an hour, when she was suddenly seized with vomiting — the matter ejected was in small quantities, and like white of eggs beaten. Purging immediately followed, small in quantity, and bilious in appearance, having fœcal smell. She then rested an hour and a half, when a copious discharge, from four to five pints, took place from the bowels, of a thin fluid free from smell, nearly colorless; but having a slight pearly appearance. Venesection was now attempted from both arms, but with difficulty could get six to eight ounces. The pulse soon after become weak and thready, and at half past eight was imperceptible. Three or four ounces of blood were taken from epigastrium by cupping, and sinapisms and hot applications applied to the surface. Calomel, opium and camphor were used internally. Spasms in legs and abdomen were severe, but yielded readily to friction. The face, neck and hands became cold — skin of feet and hands dark colored and corrugated — eyes turned up — tongue and breath cool, and countenance ghastly. A tumbler of warm water saturated with common salt, caused immediate vomiting, and for a few minutes the pulse became perceptible — a second dose had no such effect. Her mind was not impaired — silent and despairing of recovery. The respiration became more difficult till two o'clock, P. M., when she expired. *Autopsy* not permitted.

Case IX. Sept. 11th, an Irish laborer, thirtysix years of age. He resided in Fessenden's Court, rear of 77 Elliot-street, and was reported to have been of temperate habits. Said he had had diarrhœa for two days before seizure very severely; but had continued to work until the evening of the 11th, and eat his meals as usual. Was seized with cramps about 8 o'clock, and visited at about 11. He was then taken to the Tremont-street hospital in a state of collapse, from which no reaction took place, and he died

at 5 o'clock the next morning. The treatment consisted of frictions, sinapisms over almost the whole surface, and every twenty minutes a pill containing three grains of calomel and one-sixth of a grain of sulphate of morphia.

Autopsy. Muscles very dark — vessels of small intestines uniformly injected — nerves of solar plexus unusually distinct — intestines generally contracted, especially the large — mucous coat throughout lined with copious white mucus, and contained a large quantity of gruel-like fluid — slight fœcal smell in large intestines — stomach contained about ℥ xx. dark colored, dirty looking fluid, in which were observed ℥ iii. of fragments of carrots and potatoes — no appearance of bile in intestines — bladder contracted — right semilunar ganglion more distinct and regular than usual, otherwise natural.

We shall continue an account of the cases in our next number — intending, if we escape any more extensive visitation of the disease, to give a similar notice of all that may occur in the city, and to follow with such remarks on the natural history of it, as an accurate observation of the time, place, and circumstances of its occurrence may seem to authorize.

Operation for Prolapsus Ani, followed by Dangerous Hæmorrhage.

The following very instructive case is from Fletcher's Medico-Chirurgical Notes, and copied into our pages from the London Lancet.

The lady of a military man of rank, living at a fashionable watering-place, consulted me, by the advice of her physician, for a falling down of the bowel of an immense size, and which was almost constantly prolapsed, as even standing for a moment would effect its descent. The lady was old, and of a very relaxed habit. The protruded part was replaced easily, and the clenched fist would, with equal ease, have followed through a sphincter which had no trace of the power of contraction left. There was nothing unsound in the canal of the gut, nor the stricture of it, which last affection I have seen to produce a protrusion of the lower part of the bowel.

In this case, the cause was, probably, the long-continued action of the purgative medicines, in which injurious habit she had indulged for many years.

There was very little of loose integument about the verge of the anus, and from this circumstance, together with the destruction of the power of the sphincter, there were but slight hopes of a cure, though there might be some of amendment, from an operation. I explained this to the husband, who, however, at the desire of the physician, wished that a trial might be made. Lodgings were procured, and it was done. Taking some points of

slightly-projecting skin for a guide, considerable portions were raised from the inner margin of the anus, so that a wound was left which nearly surrounded it; no bleeding then took place, and after a compress and bandage were applied, I left the patient in bed, under the care of a pupil, to attend particularly to any hæmorrhage that might probably ensue from so extensive a circumcision of skin. He remained with the patient for an hour, but unluckily, a feeling of false modesty prevented him from examining the bandage before he left.

About two hours afterwards I was sent for in haste; she was said to be bleeding to death. Though cautious in taking the necessary steps to prevent secondary hæmorrhage, yet was the surprise at the spectacle before me, from so trivial an operation, only exceeded by the shock it excited, and the train of painful feelings which followed. My own responsibility (for in this operation it was justifiably stated there was no danger or risk of life), the rank of the patient, and her obvious and immediate danger, from the error of the pupil, created feelings which may be better conceived than described. She was lying upon her back — motionless, or with a little tossing of the arms, muttering incoherently a few broken words — cold, with a blanched and ghastly expression of countenance, pulse scarcely to be felt. The bed smelt strongly of blood, and on turning down the clothes, she lay soaking in it, the steam from which arose, and yielded, by association, a horrid and sickening impression of her fate. I first poured down her throat a large quantity of brandy, and then proceeded to examine the wound; it did not bleed. More brandy was given; she was well covered with blankets, and had bottles of hot water applied to her feet. A small vessel at length, showed itself on the right side of the anus, which was secured. The pulse rose, warmth ensued, and with great attention and abundance of stimuli, she became safe, after an immense loss of blood, at seventy years of age, from the bleeding of a small artery, of some hours' duration.

Happy would it be for reckless young operators to meet with so salutary a lesson in early practice; it would not soon be forgotten: thus teaching, better than rules, the necessity of the most rigorous attention to the precautions for the prevention of secondary hæmorrhage, and to an early detection when it does take place, which was here altogether overlooked by the pupil.

The operation succeeded in restraining the prolapsus better than was expected. The bowel descended in some degree after the healing of the wounds, when she was at the water-closet, to the extent perhaps of one-fifth of its former size. With the aid of a spring truss, with a spherical pad, the prolapsus ever afterwards was very tolerably manageable; the patient could now walk about without its recurrence.

Condition of the Poor in the Borough of Southwark.

While the following statement exhibits a scene of what must have been pourtrayed in the metropolitan cities of Europe during the prevalence of the Cholera, the benevolent heart must rejoice that any approach to such abjectness of misery is morally impossible in any town or city of this portion of our country. It is from the pen of an eye witness in March of the present year.

E.

In company with Dr Gilkrest I paid last week a visit to that part of our great metropolis, and never shall I forget the heart-rending scenes of misery which I there witnessed. In one house in Christ church parish we were requested to visit a child just attacked with the cholera. Dr Gilkrest and myself visited this child. We ascended a dark pair of stairs, and were ushered into a room more resembling the den of a wild beast, than the habitation of a human being. On entering this human den we saw a tall woman having the appearance of a living skeleton, seated on a box in the middle of the room. In this poor woman's face was depicted a sensation of acute mental suffering. Her half-clothed body, her haggard and ghastly features, her palsied limbs, were sufficient to excite, even in the most callous of human beings, feelings which no tongue however eloquent, which no pen, however powerful, could with justice describe.

In this woman's lap was her child, half naked, who had just been attacked with symptoms of cholera. By the mother's side sat another daughter, apparently half-starved, partially covered with a dirty blanket. In this room, in which this wretched family had lived for twelve years, there was no fire-place or fire, nor the vestige of a bed or bedding. The air of the place was so highly contaminated, in consequence of an accumulation of filth in one corner of the room, that it alone, independent of the influence of contagion, was sufficient to give origin to the most virulent disease. This family subsisted on *two shillings a week*, which small sum they got from the parish in which they lived. I could not have thought for a moment that in a city like this, renowned for its wealthy and benevolent inhabitants, a scene so revolting to human nature could have existed. The only effectual way of stopping the progress of this pestilence is to remove the *predisposition of the poor*. Why is this disease, it is frequently asked, confined almost exclusively to the wretched hovels of the Irish poor? Because they are suffering from the most acute moral and physical depression. Give food to the hungry, clothe the naked, remove the filth from the habitations of the poor, and the cholera will quickly disappear. Some months ago we heard of sermons being preached and collections made for the starving poor in Ireland; have our clergymen no sympathy

for the starving poor in this great city? Is there not *one* benevolent clergymen who will set the example, and devote one half hour, in pleading on behalf of the miserable, starving, poor in Ireland? Eloquence might here find a theme on which to exhaust itself. Would that the departed spirit of the benevolent Howard could visit this city; — what would be *his* sensations! I hope, Sir, the daily press, instead of devoting their time to the discussion of the question of the existence or non-existence of Asiatic cholera in London, will endeavor to rouse the dormant sympathies of the benevolent, by pointing out to them the condition of the starving poor in this city. What say the Scriptures: "Blessed is he that considereth the poor; the LORD will deliver him in time of trouble." — Psal. xli. With every apology for occupying so much space in your Journal, believe me to be your obliged and obedient servant,

FORBES WINSLOW.

London, March 5, 1832.

GOOSE GREASE.

It is a merit claimed by many domestic remedies, that if they do no good they can do no harm. The popular prescription of goose grease which is much resorted to as a vomit and a demulcent in catarrhal inflammation in children, is in a fair way of losing this negative recommendation. The following case of poisoning by the sebacic acid contained in goose grease is quoted* from Hufeland's Journal. On the 2d. of April 1829. Dr Siedler was called to attend M. M. H—, and their children. On his arrival he found the two brothers H—, one aged 31, the second 28 years, and the two children of the first, one a girl aged 4. the other a boy aged $2\frac{1}{2}$, all presenting the following symptoms, of cold sweat, anxiety, vertigo, general paleness and prostration of strength; eyes sunken and pupils dilated; burning pain was felt in the lower part of the belly increased by pressure; violent vomiting succeeded to ardent thirst, for which the patients had drank large quantities of milk, which was thrown up without producing any effect; tongue dry, involuntary discharges of urine and fœces.

The eldest brother was insensible for six minutes, his respiration scarcely visible, his pulse imperceptible, and the heart's action exceedingly weak. His second brother had vomited blood several times, but he experienced less abdominal pain than the other. In the little boy the globes of the eyes were turned upwards, the lips livid, and the pulse scarcely sensible. Lastly the symptoms in the little girl were mildest of all. M. Siedler

* Jour. Royal Ins.

suspected at once that these accidents were occasioned by the use of a certain quantity of goose-grease which had been employed in the preparation of some meat of which the four patients had eaten shortly before the symptoms began. An emulsion containing hyoscyamus was prescribed; and on the 9th of April all had recovered.

The vomited matters were subjected to chemical analysis. They were strongly acid but contained no metallic poison: but the following facts induced Dr Siedler to attribute the illness to the effect of sebacic acid. The lady of the house had made use of some goose-grease to dress some meat, and all the persons who partook of the dish fell quickly sick. The lady herself who had barely tasted it, felt it so disagreeable that she took no more. Some of the grease which was suspected to have caused the accident remained for examination, the pot which contained it having been entirely emptied and cleansed out; but on examining the same kind of grease contained in three other pots, it was found to exhale a strong repulsive odor, and it resembled strongly blue paper tinged by tumeric. Three ounces of this grease were given to a vigorous, well-formed dog: an hour afterwards, his extremities become violently convulsed: he cried piteously, he refused to eat, his eyes were suffused, pupils dilated, skin cold, and arterial pulsations scarcely perceptible. In this state he continued for thirty hours, after which he slowly recovered.

Dr Spurzheim.

The first professional essay of this distinguished foreigner in our country, took place in this city during the last month, in a series of demonstrations of the structure of the brain, conducted in one of the apartments of the Medical College; and we rejoice that it was so eminently successful.

It must have been gratifying to him, as it certainly was honorable to the scientific character of our community, to find himself surrounded at once, without any public advertisement, with a large and attentive class, comprising almost the entire medical corps of the city, together with many other gentlemen of literary habits or tastes, from the other professions. And on the other hand, we have no hesitation in saying that those who constituted this spontaneous and inquisitive congregation of learners were not less satisfied with their new instructor, than he must have been with the flattering circumstances under which his first lessons were given. These lectures were six in number, and with the exception of some remarks on the common method of demonstrating the brain, and on the nomenclature at present applied to its parts, they were rigidly descriptive. He began his dissection

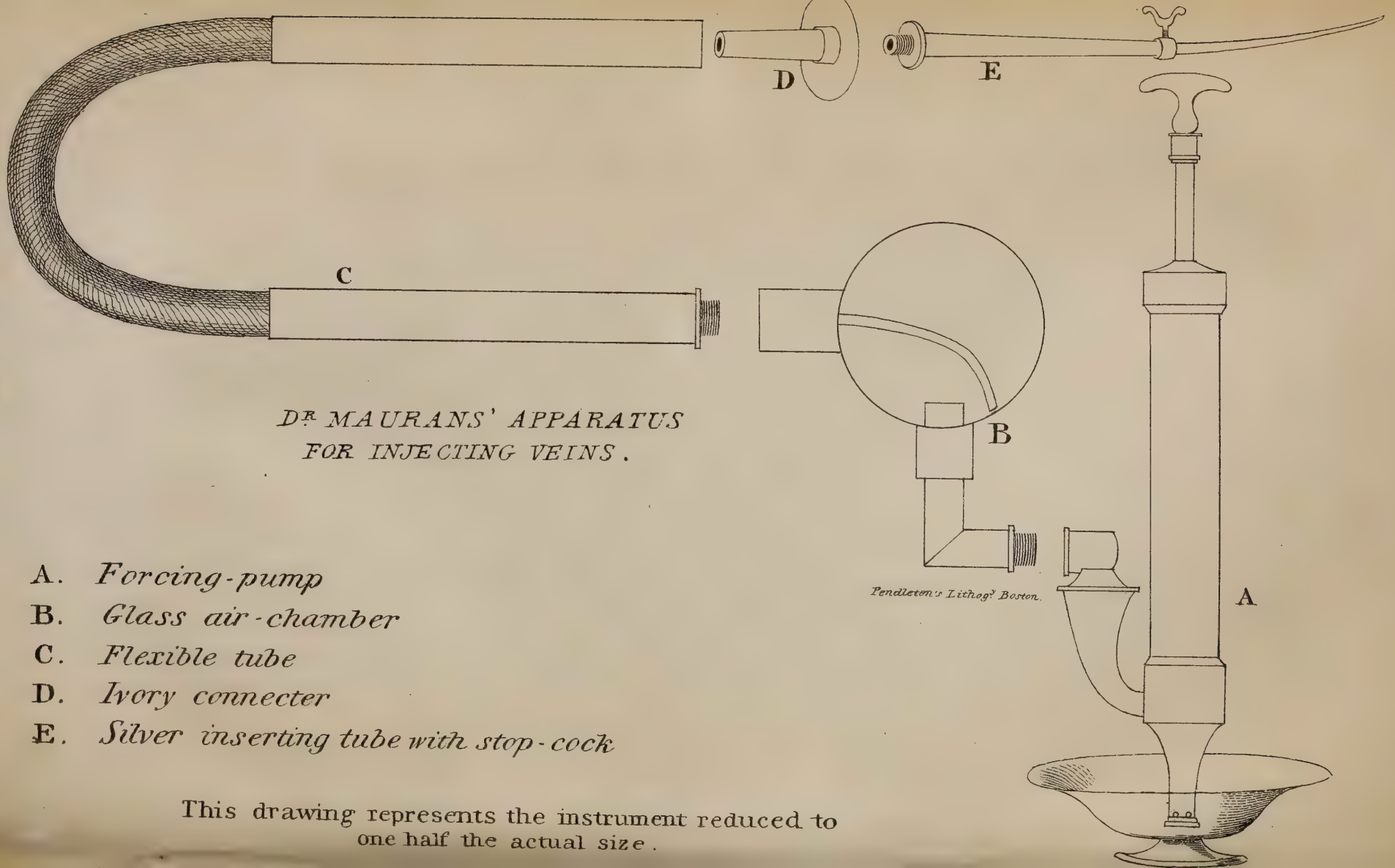
at the termination of the medulla spinalis, according to the method of which Gall was the author, and following the direction of the fibres, demonstrated in succession the several cerebral parts which they formed in their course and termination upwards, employing only such names from the old nomenclature, as were significant of the function of the part to which they were applied.

The common practice of slicing the brain from the vertex, and applying unmeaning and in some instances offensive names to the mechanical appearances thus brought out, which, together with the exhibition of certain inconsiderable parts, and a repetition of some stale hypotheses connected with them, have heretofore constituted the sum and substance of anatomical lectures on this noble organ — all these practices were not only omitted by Dr Spurzheim, but strongly, and as we think, justly reproved as destructive of the very organization which the anatomist wishes to detect and display, and as furnishing no knowledge of structure calculated to guide us in determining the functions of the cerebral parts. Some of his remarks on these points were seasoned with a keen but good-natured satire, and occasionally with humorous reference to the old system or its names, which rendered them highly entertaining as well as convincing.

On the whole, the demonstrations were immediately instructive and interesting, to all who heard them, and will have the effect, as we hope, of introducing a more physiological, not to say more philosophical method of examining the brain than has prevailed.

In these lectures the Doctor had little or nothing to say *directly* about his peculiar phrenological principles; but some gentlemen have observed, that through the whole he was indirectly and ingeniously laying their foundations in the views of cerebral structure which he presented. If he can establish his phrenology, or any other explanation of mental phenomena, by legitimate inferences, on such a foundation as was laid in his fair and satisfactory exhibitions of the structure of the brain, we will only say, amen: a system of philosophy thus established will certainly stand, unshaken as little by the cavils of those who are unwilling, as by the ridicule of those who are unable to comprehend its pretensions.

The popular course on phrenology is now going on, and is attended with increasing avidity by constantly increasing audiences; but with what success as to converts we are unable to learn. E.



Dr MAURANS' APPARATUS FOR INJECTING VEINS.

Pendleton's Lithogy Boston.

A. *Forcing-pump*
B. *Glass air-chamber*
C. *Flexible tube*
D. *Ivory connecter*
E. *Silver inserting tube with stop-cock*

This drawing represents the instrument reduced to one half the actual size.

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I.—CAUTIONS IN AUSCULTATION.

By J. GREELEY STEVENSON, M. D.

Read before the Boston Society for Medical Improvement, and committed to Doctors Ware, Fisher and Jackson, to consider and report thereon.

In this paper I propose to ask your attention to some of the uncertainties which affect the diagnostic signs afforded by the stethoscope, and by percussion. I am far from doubting the value of the discovery of Laënnec. A little acquaintance with it, and the observation of its practical application by its illustrious author, must produce the conviction that sagacity and extensive observation and unintermitting use, may find in this means of diagnosis more certain indications than are furnished elsewhere. But without great study and constant practice we are in danger of being misled by phenomena, the precise value of which we may not know, of being distracted from the occupation of those materials of judgment which are truly within our reach, and of losing the reality of knowledge while we exhibit the semblance of it to the undiscerning.

Without an attempt to discover or to magnify dangers, and confined to those which are admitted to exist by Laënnec and his most zealous disciples, I would recall to your recollection some of the sources of error which may obscure the auscultation of the most common diseases of the lungs and their membranes.

Bronchitis.—As the disease declines, and the inflammation of the mucous membrane is less active, the effused mucus becomes less serous, better concocted, as the ancient phrase was, more dry, and offers a greater resistance to the passage of air

into the bronchial ramifications. This resistance may increase to such a degree as to produce a complete obstruction of an air tube; and consequently the sound of respiration ceases in the part supplied by that tube, while in fact the pulmonary tissue is quite permeable by air. This accidental phenomenon might give the idea of a pneumonitis supervening to a bronchitis; and the probability of falling into this error is greatly increased, if a submucous rattle has previously existed. This rattle is formed in the extreme bronchi, the bubbles are smaller and finer than those of the common mucous rattle, and are in truth crepitant; this submucous rattle is easily confounded with the crepitation of the first stage of pneumonitis; they are so similar, indeed, that Andral thinks that a real crepitant râle may be produced by a simple acute bronchitis. So that in a catarrh the auscultator, hearing the submucous rattle, mistakes it for the crepitation of the first stage of pneumonitis, or engorgement, as Laënnec terms it. Next, the mucus becoming more dry may obstruct the bronchi so as to prevent the ingress of air into a portion of the lung; the respiratory murmur will cease to be heard in the corresponding part of the thorax; and thus will arise during the decline of a catarrh, the physical phenomena of a pneumonitis advancing from its first stage to hepatization, its second degree. It may be said that as in the one case the lungs are full of air, while in the other the affected portion does not contain air, percussion would rectify the error, for in the bronchitis the sound would be hollow, and in the pneumonia flat. But in this latter disease, "when the obstruction is confined to a small portion of the lung, or when it exists in insulated masses here and there, percussion affords no information; this is also frequently the case even in an extensive engorgement of the lower part of the right lung, on account of the natural obscurity of the sound in that region from the presence of the liver." — *Laennec, tr. by Forbes, p.* 213.

Chronic bronchitis. — The difficulty of distinguishing chronic catarrh from phthisis is very generally acknowledged. The inexperienced auscultator may think that a diagnostic sign is furnished in pectoriloquy; and that hearing this he may infer the existence of a cavity in the lungs.

Laënnec uses the following cautious language; "If after having examined the patient frequently, at different hours in th day, and for a considerable period, we do not find pectoriloquy, nor guggling rattle, nor cavernous respiration, nor a permanent absence of the respiratory sound, and if the respiration is distinctly heard in the whole lung, then there is a strong presump-

tion that the disease is chronic catarrh." — *De l'Auscultation mediate, Tom. II. p. 77. Edition 1 er.*

And yet, says an able commentator and disciple of Laënnec, "I have more than once seen himself fail in the diagnosis and err." The accuracy and experience of M. Louis have not prevented his making a like mistake. Indeed it is extremely easy to err; for after the bronchi have been long affected by chronic inflammation, they become hypertrophied, and dilated sometimes into cavities which may contain a walnut; the same tube may have several enlargements of this kind, and they may exist in several branches. In this condition we may have more or less perfect pectoriloquy; a large mucous rattle exactly like the cavernous rattle in phthisis; cavernous respiration; cavernous cough; and even the veiled puff of the tubercular cavity with thin parietes; in truth all the phenomena which mark a cavity by tubercular excavation.

Pneumonitis. — Without great care and discernment in the observation of the physical signs, this disease may easily be confounded with bronchitis. In the first stage, or that of engorgement or obstruction, the ingress of air into the pulmonary cells is partially obstructed; whence the natural respiratory murmur is impaired; and the bubbling passage of the air through the viscid secretion of the mucous membrane of the small bronchi, produces a crackling sound denominated the crepitating rattle, which is the pathognomonic sign of pneumonitis in this stage. Now in bronchitis the respiratory sound is weak; and the submucous rattle, which is produced by the bubbling of air through the mucus in the small bronchial tubes, bears a close and often an exact resemblance to crepitation.

In the second stage of the disease, the air cells and minute bronchi are obliterated, the spongy texture of the lung is destroyed, and the organ is converted into a more or less solid mass; it is hepatized.

The natural vesicular respiration now ceases, the sound on percussion is quite flat, and the solidified portion having become by this change a better conductor of sound, "transmits" to the ear placed over it the "sound of the air passing to and fro in the large bronchial ramifications," i. e. it conveys the bronchial respiration. But the auscultator must be upon his guard. For in the first place, percussion, which gives no sign if the pneumonitis is central or of small extent, always gives doubtful signs if the inflammation is at the inferior, posterior, or lateral portions of the lungs, on account of the want of sonorousness natural to some persons, and of the vicinity of the abdominal organs; and

unfortunately, as these portions comprise the most frequent seat of the inflammation, positive signs are here the more necessary. Secondly, The bronchial respiration, when acute and well defined, is certainly very different from the diffused sigh of natural vesicular respiration. But it is to be remembered that it is not well marked, but is quite obscure, in all cases except those in which the hepatization occupies the summit or the vicinity of the root of the lung, and extends to the surface of the organ; in a vast majority of cases, therefore, the sign is equivocal. When the surface, for example, of the lung, or a central portion, alone is hepatized, the sound of bronchial respiration may be wanting; or it may be so modified by being imperfectly transmitted through the condensed portions of lung, as to be mistaken for natural respiration. Thirdly, When the inflammation occupies a considerable portion of the lung, the respiration becomes puerile or supplementary in the healthy portion, the function of which is going on with increased activity. This puerile respiration, which is the healthy respiration exaggerated, not modified in quality, may be transmitted through the hepatized portion of the organ, simulate the respiratory murmur of this part, and lead the auscultator to conclude that the part beneath his instrument is freely penetrated by air. Great care is necessary to avoid the error of mistaking a distant puerile respiration for the sound of healthy respiration beneath the stethoscope; experienced observers have thought they heard the respiratory murmur in a lung, when an examination after death has shown the organ compressed against the spine, and the thoracic cavity of that side filled with water or with pus. In these cases, the sound of respiration in the healthy lung being increased in intensity, was conveyed through the fluid which filled the other side of the chest, and reached the ear at the surface, with the characters of healthy respiration.

Andral, than whom there is not a better authority on this subject, says, "that when pneumonitis is complicated with catarrh, the loud mucous rattle of the latter disease may completely obscure the crepitating rattle of the former." This is a fruitful source of error, for the complication is very frequent; and besides the rattle in catarrh may be submucous, which is extremely like to crepitation. The facility of erring in the diagnosis is further increased by the fact that in this first stage of pneumonitis the thorax often sounds on percussion equally well as in catarrh.

Œdema of the lungs. — It is important to distinguish this

disease, which is not rare, often succeeding to scarlet fever, measles, severe pneumonitis, acute and chronic bronchitis, long continued febrile and organic affections, and becoming the principal object of treatment. Auscultation is here a treacherous guide. For the serous fluid which is effused into the cellular membrane of the lungs, "swells up this interstitial texture, and presses upon and partially obstructs the smaller bronchi; so that the air passing through the liquid contained in them, produces"* a crackling sound which has all the characters of the crepitating rattle of pneumonitis; the two sounds do not differ in kind, "they pass into each other by insensible gradations." Add to this that the respiratory murmur is enfeebled, and that percussion does not yield a flat sound, and it will be seen that the nicest accuracy and most extended use of auscultation are necessary to enable the observer to distinguish this disease from pneumonitis. Laënnec gives three cases of œdema of the lungs; in two of them the affection was overlooked in the diagnosis, and was revealed by an examination after death.

Hœmoptysis. — When a hœmoptysical engorgement takes place, the chest, if the disease is of considerable extent, emits a dull sound on percussion; the sound of respiration is inaudible over the affected portion of lung; while around this spot is heard the crepitating rattle, produced by the infiltration of blood and serum in the pulmonary texture. Here we have the physical signs of pneumonitis in its second stage, hepatization; and the history and general symptoms must not be neglected by the auscultator.

Pleuritis. — There is not any stethoscopic sign which could reveal the existence of a pleurisy, were it not attended by a serous effusion into the cavity of the pleura. It is true that at the beginning of the disease, "if the pain is very acute, the natural sound of respiration becomes diminished on the affected side;" but in rheumatism or any other pleurodyne the respiratory action is equally restrained by the pain, and therefore this is useless as a diagnostic sign. Effusion, however, soon commences; and sometimes is so rapid that after a few hours' continuance of the disease, the lungs and even the bronchi are compressed by the fluid, which nearly fills the cavity of the pleura. Without great care and experience one may be misled even when this important organic change has taken place. The first sign of the effusion is a diminished resonance of the chest on percussion in the inferior dorsal and lateral regions; but it is to be remembered that in many individuals in health the chest sounds flat as

* Williams.

high as the fifth rib, and that percussion always gives doubtful signs in these regions on account of the proximity of the abdominal organs. The natural respiratory murmur is not extinguished until the pleuritic effusion is very copious.

We must be prepared to guard against another source of error arising from the existence of the vesicular respiration : for wherever there is an adhesion of the lung to the pleura costalis, the effusion cannot destroy this respiratory murmur ; and we hear a healthy sound in the midst of disease. Again, when the lung of one side is compressed against the spine by the effused liquid, the respiration of the other lung, which is called into increased activity and to do double duty, becomes puerile, i. e. very loud ; and this sound may be conveyed through the fluid in the diseased side to the ear of the auscultator, and may convey the notion of healthy respiration. The necessity of caution in this condition of things has been mentioned before ; the liability to fall into the error is perhaps great enough to excuse the repetition.

The distinguishing sign of pleuritis is the sharp, tremulous sound of the voice, resounding in the bronchi, and transmitted through the effused fluid to the ear at the surface: Laënnec named this sound ægophony, from its resemblance to the bleating of a goat. This is one of the symptoms, unhappily so rare in semeiology, which truly deserves the name of pathognomonic ; whenever we hear it we may infer that a liquid is effused in the thorax. But while the presence of this sign gives such a certain indication, we may be deceived by its absence. It continues to be heard only for a short time ; for often in the space of one or two hours so much fluid is effused as to compress the bronchi themselves ; and consequently there is not any longer a broncophony, or resonance of the voice in these tubes, to be converted into an ægophony. This sign may thus arise and cease within a few hours; and the auscultator may not have an opportunity of hearing it. He should be careful to remember, then, that he is not to look for the continuance of this symptom, unless the effusion is moderate and is stationary ; and that he will rarely find it in cases of rapid and extensive disease. In chronic pleurisy, or empyema, ægophony is rarely to be observed, on account of the advanced stage in which the disease is submitted to medical treatment ; the phenomena which may indicate the effusion are a want of the natural respiratory murmur, and dulness of sound on percussion ; signs which are tokens of various other states of the thoracic cavity and contents. The statement of an extreme case will illustrate

the necessity of caution in judging. If the whole of a lung be inflamed in the second degree, be hepatized, although there is not any fluid in the cavity of the pleura, no sign exists to distinguish it from a copious pleuritic effusion; unless we consider an increase of the broncophony at the root of the lung to be such; but as this is a difference of degree only, it cannot give the least certainty or confidence in diagnosis to an ear that is not incessantly practised and accurate to the extreme of nicety.

Phthisis pulmonalis. — In this complicated disease there are many phenomena which may mislead the auscultator, who pays little attention to general symptoms. The disease is incurable, it is true, when recognised; and this may reconcile us, in some degree, to the want of indicative signs in certain stages of the disease, and to their ambiguity when they do present themselves.

There are not any physical signs by which tubercles of small size, though they may be quite numerous, can be recognised, when they are separated from each other by portions of healthy tissue. Even where the pulmonary texture is rendered solid by disease, the air cells in the vicinity are very generally enlarged; and thus a combination of emphysema with induration, causes the sound of percussion to be healthy, and makes this means of diagnosis deceptive.

The stethoscopic signs are, perhaps, still more equivocal. In tubercular induration we may expect to find the natural "respiratory murmur less distinct than usual; or it may be somewhat bronchial in its character; and a diffused broncophony will be heard in the regions which correspond"* to the indurated portions of lung. But though these signs are distinct and easily recognised, the cautious auscultator will be greatly restrained in the application of them. For, owing to the existence of bronchial tubes of considerable size at the apices of the lungs, the phenomena of bronchial respiration and broncophony often exist, in health, at the region between the scapulæ, in the vicinity of the sternum, and in the axilla. Now when it is remembered that tubercles chiefly infest the upper part of the lung, it will be seen that our sphere of unequivocal observation is reduced within the narrow limits of that part of the subclavian region which is near to the head of the humerus. And, whether from the occurrence of acute catarrh, or from the irritation of the tubercles, an abundant pituitous expectoration almost always occurs, and increases the obscurity of the signs of tubercular induration by superinducing various catarrhal rattles.

* Williams.

As the disease advances, the tuberculous matter becomes softer and moister, and finally fluid, and finding its way into some of the neighboring bronchial tubes, is expectorated; a fistulous cavity and opening are formed, and the air, during respiration, passing in and out through the liquid which remains, produces the gurgling, cavernous rattle. "This is an exaggeration of the mucous rattle; and so nearly resembles that which is produced in the trachea and large bronchial ramifications, that it must be considered doubtful, when heard only near the sternum, in the axilla, or in the upper part of the interscapular region, as it may here be produced in those vessels."* I quote the above observation from a pupil and commentator of Laënnec. The prudent auscultator will justly infer that throughout the upper part of the thorax, to which chiefly he must look for the physical signs of tubercular excavations, the region near the shoulder is the only place in which the gurgling cavernous rattle may not easily be confounded with bronchial respiration and mucous rattle. He will also remember that, if the patient is emaciated, as most phthisical patients are, the sounds produced in the large bronchi are very loud, and increase the danger of mistake. In these patients, too, the parietes of the chest act as a sounding board, and communicate through the stethoscope the rattles which are made in the trachea, and even in the posterior fauces, which are very similar to the gurgling sounds of a cavity.

"Pectoriloquy, when it is perfect, and is heard in parts where naturally there is little or no resonance of the voice, proves the existence of a cavity communicating with the bronchi." But the application of the instrument is here again restrained by the caution which limited it in the investigation of the preceding symptoms; for in those persons who are emaciated, and who have sharp voices, the natural broncophony may extend to the middle of the scapular, subclavian, and mammary regions; while in the usual seats of this sound there exists a laryngophony, which is exactly like pectoriloquy, and is in no way to be distinguished from it. Again, the pectoriloquy is always imperfect, and therefore an ambiguous sign, when the cavity is small, when it has not a perfect communication with the bronchi, and when it is distant from the surface of the lung. These conditions narrow the application of the sign, as a certain sign, to a comparatively small number of cases.

A circumscribed inflammation frequently occurs in lungs which contain tubercles, or it may supervene to a chronic ca-

*Williams.

tarrh; in either case a broncophony is produced, which bears the closest possible resemblance to a pectoriloquy arising from a row of small excavations in phthisis.

The danger of confounding the phenomena produced by dilated bronchi, in chronic catarrh, with the signs of tuberculous excavation in phthisis, has been already mentioned, and needs not to be further insisted on.

I have in a very cursory and imperfect, though I fear tedious manner, stated some of the dangers to be avoided in forming a diagnosis from the signs furnished by percussion and auscultation. These should not deter us from the study of the stethoscope and its applications. They should warn us not to slight the cultivation of other sources of knowledge in pulmonary disease; and to use the imperfect acquaintance we may have with the instrument, without ostentation, and singly with the desire of increasing it. When employed as an instrument of imposition and quackery, its voice will cease to convey instruction, and its only resonance will be shame to him who thus abuses it.

Art. II. — Observations on Poisoning by Arsenic, with two Cases.

By Augustus A. Gould, M. D.

Arsenic is ranked among the irritant poisons, but is supposed to have a two-fold action upon the animal system. 1. It acts as an irritant, producing inflammation of the stomach and alimentary canal. 2. It has an action on organs remote from the stomach. The manner in which its remote effects are produced is not ascertained. That the blood is the vehicle by which it is conveyed, seems to be the general opinion, though arsenic has never been detected in the blood. Through this it is supposed to act on the general nervous system, and especially on that portion which imparts its energy to the heart; because, in these cases, the heart is found to lose its irritability much sooner after expiration than in cases of death from ordinary causes.

Arsenic is not poisonous in its metallic state, but is so in all its compounds, and most so in those which are easily soluble, or are in a liquid form. The black and white oxides are the

most deadly, and are the compounds of arsenic chiefly interesting to medical men. The smallest fatal dose of the white oxide on record is 4½ grs. *in solution*, producing death in six hours in a child four years old. The smallest *solid* dose, half a drachm. It acts with equal virulence on all the textures, if perhaps we except serous membranes. But wherever it may be applied and received into the system, symptoms of inflammation of the stomach arise in all cases, and marks of such inflammation are generally found after death.

Symptoms. The symptoms are divided by Christisson into three sets.

I. Where there is irritation of the alimentary canal with excessive general depression, without distinct disorder of the nervous system, producing death in from one to three days. This is the most common case. The existence of many of the early symptoms cannot be ascertained in a suicide, but in cases which have been described by sufferers, they succeed each other as follows. There may be an acrid, caustic taste experienced in the fauces and throat a few moments after swallowing the arsenic; or this may not occur until vomiting commences, occasioned by the lodgment of particles of the poison in these passages. Its sensible action generally commences in about half an hour, though sometimes not under four or five hours. There is first sickness and faintness; pain in the epigastric region, aggravated on pressure; dryness and heat in the throat; a peculiar hoarseness, probably caused by the obstinate vomiting; matters vomited are green, yellow, or bloody-streaked. In no long time diarrhœa commences, though not always; there may be frequent and ineffectual calls only. The pain at the epigastrium becomes more excruciating and seems like burning fire; the anus becomes excoriated. Irritation of the lungs and air passages, dyspnœa and tightness at the bottom of the chest, and sometimes even peripneumony supervene. If the bowels be much affected the urinary passages become irritated. After the irritation of the bowels has existed a few hours, convulsions ensue, commencing in the trunk and extending over the whole body, or cramps in the legs and arms, more severe than in other cases of intestinal irritation, supervene. The pulse becomes small, feeble, and rapid soon after vomiting commences; the surface becomes cold and livid; the features collapsed, and expressive of torture; the eyes red and sparkling; tongue and mouth parched and sometimes affected with ulcers and aphthæ. Delirium and stupor not un-

frequently supervene in the advanced stages. Death usually comes on calmly, but sometimes with convulsions.

A gentleman, who with his family was maliciously poisoned by the white oxide, describes the taste imparted to the food and liquids with which it was mixed, as somewhat astringent, like that of the roasted heart of fowls. The vomiting, which commenced in about half an hour and was aided by emetics, seemed like the operation of an ordinary emetic; the desire to vomit was sudden, not preceded for any length of time by nausea, and unattended by any extraordinary pain. In these cases the poison was soon evacuated, and all recovered. The sickness continued three or four days; no irritation of the bowels followed except from cathartics, and all were left in a state of great exhaustion.

II. In the second set of cases, according to Christisson, there is little sign of irritation in the alimentary canal, frequent fainting and excessive prostration, and death occurs in five or six hours, before inflammation becomes developed. There may be one or two attacks of vomiting, but they seldom continue; occasionally there is stupor and often slight convulsions. Pain at the epigastrium is present, but very slight. Such cases are very rare, and only occur where the dose has been large, in solution, or in small masses.

III. In a third class of cases the signs of inflammation are succeeded by derangement of the nervous system, such as palsy, epilepsy, hysteria, mania and coma. These supervene in cases where the dose has been small, or when the patient has been rescued, and do not come on until after the inflammation abates. The more remote effects are, irritable stomach, dyspepsy, emaciation, falling off of the hair and nails, tender skin, &c.

Several diseases present many of the preceding symptoms, but the affections for which this mode of poisoning is most likely to be mistaken, are bilious vomiting and cholera. In cholera especially, we have the same tenderness and burning sensation at epigastrium, vomiting, purging, excoriation of the anus, depression and anxiety, inflammation of the stomach, redness and ulceration of the throat after vomiting. The only distinctive marks suggested by authors are, that in cholera the matters vomited are never bloody, and the fatal termination is less speedy. But it has occurred to me to see bloody vomiting in cholera more than once; and although the ordinary cholera in our climate may not be so rapidly fatal as poisoning by arsenic, yet the epidemic or malignant cholera is certainly as much so. Neither is there any mark, among the morbid

phenomena discovered after death, which is peculiar to poisoning by arsenic. The presence of a sanguinolent fluid in the stomach, is noted as important, because this is said never to be found in cholera. That it never is found is at least doubtful, as may be gathered from what has been stated above. So that it is not to be wondered at, that so many cases of poisoning by arsenic, where there is no suspicion of design or malice, should have passed through the hands of physicians as cases of ordinary cholera.

Two cases of poisoning by arsenic have occurred to me, one of which recovered, and the other proved fatal. A few facts relating to them may be interesting.

No. I. E. T. a single woman about twentyeight years of age, took a heaped tea-spoon of ratsbane, spread upon some broiled kidney. This was about eight, A. M. In about half an hour she began to vomit, and continued to do so, frequently, through the day. As she was pregnant, and had several times previously suffered from attacks of violent vomiting, no suspicion was excited, and she was merely supplied with drinks. About ten, P. M. her distress was such that she began to repent of her experiment, and concluded to apply for medical aid. I found her with the pulse full and rapid; skin hot and dry; countenance flushed, with the brows contracted, and indicative of the greatest agony; tongue, mouth, and fauces, blood red, parched and apparently denuded, and of this she complained greatly; great tenderness on pressure at the epigastrium; incessant nausea and retching, and occasional vomiting; no evacuations of any amount from the bowels.

The only chance of saving her at this late period, seemed to be by allaying the constitutional excitement, and any inflammation which might have been induced. This opinion and the means employed were sanctioned by Dr Channing, who was called in consultation. She was bled ʒ xx; a blister was applied to the epigastrium; warm applications were made to the feet, and she was directed to drink freely of milk and flaxseed tea. Having done this I left her, not doubting that a fatal issue was near. In the morning however, I found her greatly relieved. The pain at the epigastrium was much diminished, the vomiting gone, and the throat less red and ardent. Little purging had yet occurred, and she was ordered Ol. Ricini ʒ j. to be taken in milk. Knowing that remarkable remissions sometimes take place, in cases of this kind, I gave the patient but little encouragement from the circumstance of her present relief. No relapse, however, did occur; and she gradually recovered as soon as could

be expected from the violent and copious evacuations which she had undergone. None of the untoward circumstances enumerated as belonging to cases of recovery, such as mania, palsy, epilepsy, dispepsy, &c, supervened : and she was delivered of a healthy child on the twentieth of the same month, seventeen days afterwards, and had milk sufficient to nurse two children. It is remarkable that she made two previous attempts to poison herself without success, once with Tr. Opii. ʒ , and again by one dram of solid opium, both of which she soon rejected. It is also somewhat surprising that such incessant and violent vomiting should not have induced premature labor.

This case would therefore belong to the first class of Christisson, all the phenomena being those of inflammation without nervous affection.

Case II. C. G. æt. twentythree, a young man of respectable connexions, was induced by follies and disappointments to commit suicide. He accordingly procured ʒ ss. of ratsbane, all of which he swallowed in water about seven o'clock in the morning. The day previous he had declined taking food, so that his stomach was completely empty and the poison was taken under circumstances the most favorable for immediate and fatal action. In about half an hour he began to vomit and continued to do so for some time. From his declining all attention and resisting all interference, his friends began to suspect that all was not right, and a physician was sent for about ten, A. M. He appeared in a lethargic state, with his eyes closed, would answer no questions, and obstinately resisted all attempts to administer medicines or drinks. Watery discharges, yellowish, and slightly mixed with fœcal matter, were constantly occurring, involuntarily, or at least without his attending to them. The pulse was rapid, small and feeble ; the skin and extremities cold. He shrunk when pressure was made upon the abdomen, but made no complaint, and gave no other indication of suffering. A tumbler and a few particles of powder scattered about it were found in his room, which being thrown upon coals gave out the peculiar alliaceous odor of arsenic, and a neighboring apothecary soon informed us of the quantity he had purchased. Milk was forced down him by holding the nose, which was soon returned, bringing with it portions of the powder, large quantities of which had been previously rejected, and was found in the vessel used.

After many attempts to overcome his obstinacy, and to administer such remedies as afforded any probability of success

in this too evidently desperate case, all of which he resisted, persisting in his determination to die, he was abandoned to his fate, and expired at half past twelve, P. M. quietly and without convulsions, the pulse disappearing at the wrist, and the blood settling under the nails an hour at least before expiration.

An examination of the body was permitted, which took place the next day at nine, A. M. The stomach contained more than a pint of whitish turbid fluid, in which floated some masses of flocculent matter, seeming like small portions of milk coagulated. This fluid must have been formed in the stomach, for he had taken no liquids for an hour or two previous to death, and none subsequent to vomiting. Some particles of arsenic were found adhering to the mucous coat ; two or three small red patches were found near the cardiac extremity of the stomach, such as are generally found after severe vomiting, and such as I have seen produced, unequivocally, by vomiting induced in an exhausted patient by half a grain of tartrite of Antimony five or six hours before death. The œsophagus exhibited nothing unusual. The whole intestinal canal presented a uniform appearance throughout ; it was entirely evacuated of fœcal matter and its mucous membrane appeared as if it had been macerated for some hours and then thoroughly washed ; nothing like inflammation however appeared in any of the coats.

This case would therefore belong to the second division of Christisson, in which death was not caused by inflammation, but by the violent shock produced on the whole system by so large a dose taken under circumstances so favorable for its speedy execution.

The only points in which there seemed to me to be any difference between the poisoning and ordinary cholera, was the peculiar and frightful redness and dryness of the throat in the first case ; and the marked exhibition of obstinacy, and silent, sullen indifference in the second, contrasted with the restlessness of cholera.

Art. III. — Dr Mauran's account of an Improved Apparatus, for Venous Injections in Cholera.

[Communicated to the Editors of the Medical Magazine.]

We were early persuaded, that a part of the failure from the "venous injections," which have been resorted to for the promotion of reaction in aggravated cases of asphyxiated chol-

era, has arisen (under the circumstances) not so much from the *nature* of the operation, as from the manner of its performance, through the imperfections of the apparatus employed. This opinion has been subsequently fortified by the observations of Dr Francis of New York, in a very interesting letter to Dr Read of Savannah on the absorbing topic, wherein he states that "in the few autopsic examinations of subjects, after venous injections had been employed, great cerebral congestion has been found, and *air within the heart, aorta and large blood vessels;* and also, by his further allusion to the horrors of a death after the injections, which he remarks "are too terrific for delineation even by a Fuseli." Are not the results above quoted mainly the consequence of the presence of air in the blood vessels? From the perusal of an interesting communication by Dr Warren, illustrative of the appalling effects of such an accident on the system, (as fully reported in a late number of your, and the American Journal,) we are still more of the opinion that our first impressions were correct. Air in the heart, and blood vessels! — and sufficient in quantity to be perceived and noted in post-obit examinations! It certainly did not exist in a free state in the blood, nor could it have been absorbed by the liquid, and afterwards disengaged and thus rendered free, — the temperature (113° of Fahrenheit,) at which it was injected, precludes the possibility of such a phenomenon. Whence came it then but through the imperfections of the instrument employed? I allude not to the more recent very ingenious arrangement, (the Barometer tube, &c,) of Dr Depeyre of New York, and adopted by him to avoid the very terrific effects above described, — an instrument admirably calculated to avoid the introduction of air, and not otherwise objectionable than from the manifest inconvenience of its use and want of portableness.

Air being inadmissible to the blood vessels, though in ever so minute quantities, without imminent danger to life in a healthy state of the functions, how necessary must it be then to exclude it altogether in an operation intended for the relief of that state in which the vital and physical powers (extremely prostrated and reacting tardily,) are but feebly calculated to resist even present disease, much less that superinduced artificially by the very means put in requisition for effecting said relief.

Our object in addressing you is to communicate for insertion in your Journal the plan of an instrument for venous injections, which is deemed to be eminently arranged for general use, being *safe*, convenient and portable, and if its publication

should in any degree subserve the purposes for which it was intended the ends of the writer will have been fully attained.

From the experiments which have been instituted by Latta, Craigie and Mackintosh abroad, and those more recently performed in this country, we cannot longer doubt the recuperative effects of proper and judicious venous injections in aggravated cases of asphyxiated cholera, nor will their application be limited, it is conceived, exclusively to this disease, but may become eventually a beneficial adjuvant in other diseases, which, resisting the ordinary methods of treatment, would otherwise be abandoned to the powers of the fell destroyer.

Annexed is a plan of the apparatus proposed, which consists simply in the addition of the silver inserting tube, and a *glass air-chamber* to the "improved domestic instrument of Maw," (with which every practitioner and private family is or ought to be supplied,) or to the more complicated stomach and injecting pumps of Reed and others.

Method of using. — Adapt the whole, as illustrated, on the plate ; then (the pump being placed in the liquor to be employed, the stopcock freely opened, and the *tube inclined upwards*,) by a few strokes of the piston the expulsion of all the air is thoroughly effected, as will be evinced by the uninterrupted and silent jet. Having now the air-chamber nearly, and the remainder of the apparatus completely filled with the liquid, close the stop-cock so as to allow but a guttatim emission and insert with care the extremity of the tube into the vein previously opened for its reception. The contained fluid being under compression and constantly flowing from the point of the instrument during its introduction, all admission of air into the vessels is thereby effectually excluded. Another advantage resulting from the stop-cock which should be noticed, is, the perfect regulation of the current during the process of injecting.

Providence, September 10, 1832

Art. IV. — Boston Society for Medical Improvement.

Report of the Committee appointed to examine Dr Stevenson's paper on Auscultation.

The committee to whom was referred the communication read before the Society by Dr Stevenson, after a careful examination, offer the following Report.

The facts and inferences stated by the author do not in the opinion of the committee tend in any degree to diminish the confidence reposed in the indications derived by the stethoscope, when employed by one thoroughly acquainted with its use, and when taken in connexion with symptoms derived from other sources. And in fact, the author expressly disclaims the intention of producing any impression unfavorable to this instrument in experienced hands. But on the other hand they admit that under many of the conditions described in this communication, the information derived from the stethoscope must be of little value even to the most experienced; and must be embarrassing to those who rely much on the knowledge they derive from it, though still not sufficiently accomplished in its use to authorize such a reliance.

The committee regard the paper submitted to them as of much value, since without detracting in any measure from the importance justly attached to auscultation, it calls the attention of physicians to those means of diagnosis which are within the reach of all, and on which a very large majority of them must depend mainly in their examination of diseases; it may serve to warn them against believing the art of auscultation as of too easy acquisition. The committee believe that in no way is the reputation of the stethoscope so likely to be injured, as by a premature reliance on our knowledge of it. The mistakes and disappointments which this must occasion in the use of this instrument will infallibly lead us to attribute that uncertainty and those errors to the defects of the instrument which were in reality due to the unskilfulness and inexperience of the observer. Whilst, on the other hand, if we employ it with a just apprehension of the difficulties which stand in the way of a tolerable skill in the use of it — with suitable diffidence in our own acquaintance with it — and with a cautious comparison of the information we suppose it to give, with the indications derived from other sources, it may prove to every one a valuable *aid* in the difficult art of medical diagnosis.

The committee, beside this general statement of their views relating to the paper of Dr Stevenson, submit to the Society the inclosed communications from members of the committee, expressing their individual opinions on this subject.

JOHN WARE,
JOHN D. FISHER,
J. B. S. JACKSON.

Boston, June 11, 1832.

POISONING from ivy is a very common and serious affliction in the country. We do not find any account of its symptoms or mode of treatment in books. Orfila gives us its effects when taken internally. We trust the remedy employed in the following cures will be tried by our brethren in the country who may have opportunities of testing its efficacy, and we feel confident that they will find it much more effectual than the usual applications of salt and water, goose grease, &c, &c.

The first case was related by Dr GOULD at a meeting of the "Boston Society for Medical Improvement." E.

A lad about twelve years of age, while in the country about a week previously, had come in contact with the poison ivy, *rhus radicans*, which had produced its specific virulent eruption. The left arm and both legs were very tensely swollen, and their surface strongly resembled the denuded surface of a blister, scald, or burn, in a suppurating state. The similarity suggested to me the trial of the chloride of soda, which I was aware had been successfully used in burns and scalds. I accordingly directed as follows: ℞ Sodæ Chlorid. ʒ jss.; Aquæ ʒ viij. M. ft. solut.

The inflamed parts were to be first washed in castile soap and water and then cloths dipped in the solution were to be kept constantly applied, and he was to take a cathartic of Sulphate of Magnesia. On the second day I called and found the eruption dried up and the patient nearly well. It was somewhat gratifying to find in this instance a "rule which worked both ways." The success of the solution in burns had suggested to me its use in this case; and its success in the present case suggested to the mother its use in burns, and she desired me to give her the recipe that she might avail herself of it for burns.

MESSRS EDITORS — A few weeks after Dr Gould related his *case of poison by ivy*, and his successful treatment of it

with *chloride of soda* at a meeting of the Society for Medical Improvement, a lady applied to me for relief from a similar affection. She had recently returned from the country, where she had unfortunately come in contact with the poisonous plant. While there, under the direction of a skilful physician, she bathed the inflamed parts with warm water in which a portion of common salt had been dissolved, took small doses daily of Sulph. Magnesiæ, and lived upon a vegetable diet. She experienced but temporary relief from following this plan. When I saw her the skin on the lower extremities and as high up as the umbilicus was inflamed, and the itching was as excessive and uncontrollable as in the most severe cases of prurigo. I ordered the inflamed parts to be bathed frequently with a solution of Chloride of Soda, (twenty grains of the chloride to the ounce of water,) and directed the patient to take a cathartic of Sulph. Magnesiæ, ʒ ss.; Infus. Sennæ, Comp. ʒ iii. The relief afforded by the wash surpassed my highest anticipations. The irritation was almost immediately allayed, and the inflammation gradually subsided. The cathartic operated well; the wash was continued for two days, the patient kept upon a light diet, and no further difficulty was experienced.

I trust this remedy will be tried by our brethren in the country, who may have opportunities to test its efficacy. The power which it manifested in subduing the inflammation in these two cases, should I think, encourage us to try it in cutaneous diseases induced by other causes.

Respectfully yours, M. S. Perry.

Art. V. — Scarlatina.

[Read before the Boston Society for Medical Improvement by M. S. Perry, M. D.]

It is more than a year since this disease in the form of an epidemic last made its appearance in our city, and in various parts of the state. As is usual with it, its diffusion has been slow. In 1831, there were fiftyeight deaths from this disease in the city. Since this year commenced, the number of deaths from it, as reported at the *Health Office* up to June 16th, has been one hundred and twentysix, — thirtyone of these were put down as throat distemper, and ninetyone as scarlet fever. In the month of

January there were eleven deaths, in February, seventeen, in March, twentyeight, in April, twentyfive, in May, twentyeight, and in June up to the 16th, seventeen. In New York in the month of March, there were twentyfour deaths from this disease, and in Philadelphia in the two first weeks of the same month twentynine. The disease now prevails in many parts of the United States, and in some parts of Europe. In 1735, says a late author, 'scarlatina first made its appearance in North America and spread gradually but slowly over the whole continent.' Since then it has made its appearance several times in the form of an epidemic.

Varieties. — It was formerly supposed that putrid sore throat and scarlatina were distinct diseases, but at the present day they are allowed to be specifically the same, and to originate from the same cause. Most authors make three varieties of the disease, — 1. Scarlatina simplex, in which there is efflorescence of the skin, with little or no affection of the throat. 2. Scarlatina anginosa, in which there is inflammation of the fauces in combination with cutaneous efflorescence. 3. Scarlatina maligna, which is characterized by the irregular appearance of the eruption on the skin, by dark sloughs in the throat surrounded by a livid base, and by fever of the typhoid type. Dr Good makes but two varieties. 1. Rosalia simplex, which he says is accompanied by moderate fever, terminating in rash, little prostration of strength, slightly contagious. 2. Rosalia paristhmitica, in which the fever is severe, throat ulcerated, rash later in its appearance, and less extensive, often changing to a livid hue, highly contagious. It appears to me that scarlatina anginosa and maligna are distinctly enough marked to induce us to follow the majority of nosological writers in preference to Dr Good, and that there is a practical benefit derived from making this distinction. We will examine the predominant symptoms of the three varieties, and then we shall be the better able to compare and mark the difference between them.

Scarlatina simplex. — This commences with slight fever. The eruption usually appears on the second day in the form of small red points. It begins to shew itself first on the face and neck, and in the course of twentyfour hours spreads over the whole surface of the body. Sometimes on the extremities and face it forms a diffuse efflorescence. The papillæ of the tongue are elongated. They make their appearance through the white coat, which before the eruption covers the tongue, but which in a short time disappears. This elongation

of the papillæ is considered a strong diagnostic symptom of the disease. The eruption usually continues three or four days, and is followed by a disquamation of the cuticle. The throat is lightly if at all affected.

Scarlatina anginosa. — In this variety the efflorescence appears about the third day. It does not make its appearance generally in the form of red points, but in irregular patches and is of the color of boiled lobster. It sometimes alternately appears and disappears. At one time there will be hardly an appearance of it, and at another the body will be covered with it. The temperature of the skin is very high, more so than in any other disease of our climate. The pulse averages from one hundred and twenty to one hundred and forty. The tonsils and fauces are red and swollen — the voice is changed — deglutition is difficult and the muscles of the neck lose a portion of their contractile power and consequently there is a difficulty of moving the head. The eruption disappears about the fifth day and exfoliation of the cuticle is extensive ; the nails sometimes come off with it. This is truly an inflammatory disease.

Scarlatina maligna. — A true case of scarlatina maligna, is characterized by the following symptoms. It commences with pain in the head and back, soreness of the throat, vomiting and a feeling of extreme exhaustion. The eruption is irregular in its appearance and is seldom permanent. The tongue is covered with a dark colored fur. Pale white patches of ulceration surrounded by a livid base make their appearance in the throat. These are followed by sloughs. The breath is exceedingly offensive, and a viscid substance collects in the throat, and almost threatens suffocation. The nose discharges a thin acrid fluid, which excoriates the skin where it touches it. The pulse is various, sometimes soft and full, at others small and rather hard, not however so tense as in true inflammatory diseases. The voice is hoarse and hollow. If the case terminates fatally, the swelling in the throat increases and is more diffused, extending at times to the back of the ears. The sloughs increase, a tumefaction of the fingers takes place, the breath becomes more offensive, and delirium or coma follows.

All cases of scarlet fever do not however fall under the symptoms which I have here enumerated as characteristic of the three varieties, for there are some cases which commence with symptoms of scarlatina simplex and terminate in anginosa — and there are others which have the true characteristic of the latter, but which terminate in maligna. There may be a mingling of all the varieties. There are some cases which com-

mence with symptoms of cerebral congestion and which terminate suddenly.

In these cases there is more or less efflorescence; the throat is but slightly affected; the temperature of the extremities and often the whole body is lower than natural. I had during the last summer a case of this description, which terminated fatally on the fourth day from the attack. The following is the history of the case as taken at the time.

Case. — A. C. aged four years, was attacked with scarlatina, June 20th, 1831. He had the usual symptoms which precede the eruption, previous to my seeing him. His mother had given him an emetic on account of his complaining of nausea, which operated well. I was called to him early in the morning with the intelligence that he was in a fit. I found the little patient in a comatose state. The eruption had made its appearance in the upper portion of the body, in irregular patches. The head and chest were hot, but the extremities cold — pulse quick, and rather full. He was fleshy, and I could not bleed him from the arm, I therefore opened the temporal artery — applied cataplasms to his hands and feet — had his head shaved, and kept constantly wet with ice water. A small portion of the submuriate was given to open his bowels. In a short time he appeared to be relieved, would answer when spoken to — the temperature of his skin was more equal, and his pulse less frequent and full. About ten hours from the time I bled him, he began to sink into the same stupid state as at first, and leeches were applied to the temples with apparent relief. His bowels were kept open with neutral salts, and a gargle of muriatic acid was used for his throat, which was but slightly ulcerated. In the course of twentyfour hours from the time I first saw him he began to sink, and died on the fourth day. Two gentlemen of this society were present with me at the examination. We found the small vessels of the dura-mater injected with blood, and that membrane in several places strongly adhering to the bone. The vessels of the brain were engorged and the substance of that organ appeared a little softer than natural. No water was found in the ventricles. There was some sloughing in the throat, but not to that extent which I have seen in patients who have recovered. There was no unhealthy appearance of the stomach, liver, or intestines. The heart was small, but otherwise healthy. The question which I have frequently asked myself in regard to this case is, did I bleed too much or not enough? Both bleedings relieved the patient — there were symptoms of inflammation and congestion

— and post-mortem examination proved that this was the case. Two other children in the same family had the disease, one slightly and the other severely. The latter had symptoms of cerebral congestion, which were relieved by the application of leeches and ice to the head. They both recovered.

Dr Armstrong, in speaking of scarlatina maligna, says, that this should not be considered under one form, but three. The first is highly inflammatory, the second highly congestive, and the third has certain relations to both, because it is attended by venous congestion of the viscera, and by a partial and an impeded arterial reaction. The symptoms, as he describes them in the first of these, answer so nearly to scarlatina anginosa, that they may be considered as belonging to that variety. If a case of scarlatina anginosa was attended with a great degree of arterial excitement, Dr A. would put it down as belonging to the first form of scarlatina maligna. The two last forms of Dr A.'s scarlatina maligna, are characterized by the same general symptoms and differ from each other only in degree. These minute distinctions, these over-nice discriminations, seem to me to perplex rather than instruct. All cases of scarlatina maligna are not attended with a high degree of arterial excitement, with local congestion, or impeded arterial reaction as described by Dr A. Sometimes the disease, according to a recent approved writer and experienced practitioner, where epidemic, makes its appearance without fever, the ulceration in the throat making great progress and extending to the lungs and stomach. I had two cases last summer in one family, which nearly answer to this description, and which are the opposite of the case which I have just related.

Cases. — Mary and Elizabeth C., the one nine, and the other seven years of age, of delicate constitutions, were attacked with scarlatina in July, 1831. The eruption made its appearance slightly, in irregular patches, on the face and neck, — at first of a bright scarlet color, but which soon changed to a livid hue. The pulse quick, small, and easily compressed. Small white ulcerations in the throat surrounded by a purplish base — general appearance languid — no symptoms of congestion. The bowels were opened by a portion of Sub. M. and the nitrate of silver applied to the ulcers. The ulceration however extended ; the breath became exceedingly offensive. The sulph. of quinine with brandy was now given freely, and the throat frequently cauterized with the nitrate. In a day or two there was extensive sloughing, which was followed by profuse hemorrhage from the exposed surface. The dejections were like-

wise bloody. The temperature of the skin was lower than natural before the administration of the brandy and quinine. Under this treatment they gradually recovered. These children were taken about the same time, and the disease with little variation followed the same course. I saw two other cases in the month of September, where hemorrhage took place from the ulcerated surfaces in the throat, but in these the inflammatory symptoms ran high, and exfoliation of the cuticle was extensive. Dr Calhoun in a note to Dr Gregory's Practice, says, that persons who take the scarlet fever and eruption, without the sore throat, are liable on its appearance again to have the sore throat without the fever or eruption, and those who have had the sore throat without the fever and eruption are liable to have the fever and eruption without the sore throat.

Treatment. Cases of simple scarlet fever without sore throat require but little medicine. I knew a family, last summer, of five children, who had the disease, and the attendance of a physician was not required. It is when the disease assumes the second or third variety that the judgment and science of the practitioner are put to the test. In a disease, says Dr Gregory, assuming so many different forms as scarlet fever, the existing symptoms must be the guide of practice.

Cold effusion. — This has been used with wonderful success in those cases that are attended with high cutaneous excitement. It has the effect to cool the skin, allay the thirst, and diminish the pulse. It should never be used when it does not feel pleasant to the patient, when it produces chills, or when the pulse is low and irregular. Some persons have a strong prejudice against the use of cold water applied externally. When this is the case if a little spirit is added no objections are usually made. Cold effusion not only allays the heat of the skin, but where the throat is affected, its use frequently checks the local difficulty.

Dr Currie of Liverpool, who first recommended this practice, says that the bowels should be freely opened by laxitives of which the best is Sub. M.; cold water should be used as effusion, and lemonade or water with muriatic acid as drink. He also recommends a solution Ant. Tart. and states that out of one hundred and fifty cases in which he used this practice he was almost universally successful.

Emetics and Cathartics. — Emetics have been highly recommended by some practitioners in all stages of the disease — others recommend them only at the commencement. So far as my observation extends, in the severe form of the disease, vom-

iting is not easily produced, except at the commencement. The stomach seems in the latter stage of the disease to lose a portion of its vitality. At the commencement emetics are indicated. The disease, in its most severe form, usually commences with spontaneous vomiting, at other time there is only nausea. When the disease prevailed in Philadelphia, in 1783 and '84, Dr Rush gave at the commencement an emetico-cathartic, composed of calomel and ipecac. with very decided benefit. Dr Dewees recommends this practice. He says he prefers calomel as a cathartic, and prefers giving it in divided doses. He observes that this is a disease in which congestions of the great viscera are very apt to occur, and requires mercurial purges to unload the vessels, and thus restore the balance which has been destroyed in the circulation. Calomel, he thinks, has a tendency to remove and prevent congestion.

Dr Hamilton, who attributes unbounded virtues to purgatives, thinks we ought to place our main dependence upon them in this disease.

Bleeding. — This is undoubtedly necessary in certain cases. If there is fulness and pain in the head, a hard and full pulse, or symptoms of congestion or inflammation, bleeding, either local or general, is certainly indicated. Scarlatina is, however, a disease which is sometimes attended with sudden sinking, and therefore caution is necessary when depletory measures are taken. Where there has been much swelling in the throat, with symptoms of prostration, I have known leeches to be applied, to remove the local difficulty, and at the same time quinine administered freely, to support the strength. Dr Elliotson, in speaking of the use of quinine in intermittents, says, I have frequently used it, notwithstanding there was local inflammation. My object, he observes, was to cure two diseases at a time, and while I was curing the local difficulty by bleeding, I have cured the constitutional by quinine.

Gargles. — Dr Dewees says, that the best gargles are bark, with the tincture of myrrh, barley water acidulated with muriatic sulphuric acid, or an infusion of Cayenne pepper. Of the latter, he says, we are in the habit of using it in the incipient stages of organic affection, with the most decided advantage, and it seems to us the only remedy that affords relief, if ulceration has commenced. In 1787 — when this disease prevailed in the West Indies in the form of a severe epidemic — capsicum was administered internally, and used as a gargle with great success. I have found that the nitrate of silver, when it can be used, answers a better purpose, than any application which I have tried

to the throat. It seems to have the power, in some way, of changing the inflammatory action of the vessel. Where sloughing has taken place, and the breath is offensive, a solution of the chloride of lime, or soda, affords great relief.

In the treatment of Scarlatina, in all its forms, active means should not be adopted, except at the very commencement. I feel satisfied from the statements of those who have seen much of the disease, and from my own observation, that too much medicine is frequently given. For the last nine months, in the treatment of those cases that have fallen under my care, I have adopted the following general plan, and have had no reason to regret it. I have at the onset, given an emetic of antimony and ipecac. and followed this by small portions of calomel every hour, till there was a decided operation on the bowels — sponged the body frequently with cold water, when there was much heat of the skin — applied ice and leeches to the head, when there were symptoms of congestion — kept the bowels open throughout the disease, by administering a small portion of calomel every day or two, with cream tartar water, and used for the throat the nitrate of silver, with a solution of chloride of lime. When symptoms of prostration have appeared, I have given the sulphate of quinine with brandy. Where there has been a tendency to diarrhœa, I have checked it with Dover's powders. In one or two cases, where there has been swelling of the tonsils, without ulceration, great relief has been afforded by scarifying them with the lancet. The successful treatment of this disease depends more upon the judgment of the practitioner, than upon any general rules that can be laid down.

Consequences of Scarlatina. — There are certain affections which sometimes follow this disease. Among these, are inflammation and suppuration of the glands about the neck, deafness and dropsy.

When the glands are swollen and painful, bleeding by leeches will sometimes check the inflammation; the bowels should be kept open with some mild laxative. If they go on to suppuration, the system should be strengthened and supported by diet, bark, and exercise in the open air. Anasarca is the usual form of dropsy which succeeds scarlatina. Sometimes, however, there is ascites. They follow the mildest forms of the disease, as well as the most severe. Dropsy usually comes on about the 20th day after the eruption has subsided. It is preceded by a quick pulse, scanty urine, languor and costiveness. This effusion is now believed to be dependent upon a low inflammation, and is generally cured by moderate purging, and the administra

tion of nitre, squills and digitalis, with low diet. Sometimes bleeding is necessary.

Dr Bright says he has seen in one patient who had had scarlatina, the whole auditory canal of both ears lined with little vesicles, like the glands of an ice plant, and the discharge from them was acrid and profuse. I lost a patient last summer, where the parotid glands suppurated, and sloughing took place on the 20th day from the time the eruption made its appearance. In this case, there was a profuse discharge from the ears and nose, and there was considerable febrile excitement, the breath was very offensive, and deglutition was difficult. (The case mentioned by Dr McKean, not long since, before this society, where the ulceration opened into the carotid, is a curious one.) Dr Dewees says that when the parotid glands suppurate during the continuance of fever, and the parts exposed by sloughing look as if they had been carefully dissected, death has constantly followed, so far as our observations extend.

Is scarlet fever contagious? — This is a question which is frequently asked the physician, during the prevalence of the disease, and it is one on which the medical world is at present divided. Most European writers consider it contagious, and this is probably the safest opinion for us to act upon. We, however, know that frequent sporadic cases of scarlatina occur, where the individuals have had no communication with infected persons, and in these instances it must arise from some local accidental cause, independent of animal exhalations. There is undoubtedly at times, a peculiar state of the atmosphere, which predisposes persons to the disease, and if, when so predisposed, they come within the influence of the exciting cause, whether this be the miasm generated in the body of the sick, or in the open air, the disease is unfolded. Many facts can be brought in favor of the contagious nature of the disease, and many which do not correspond with this doctrine. Dr Cook, in a paper which he has recently published on scarlatina, as it appeared in St Bartholomew's in 1829—30, says, that " the disease was believed to be imported by a lady from America, who arrived here with her children, who were attacked with it on board, and it appeared first in the family in which she lodged during her stay on this island. She left here for Montserrat," where Dr C. understood the disease broke out soon after her arrival. Dr Williams, in an account of scarlatina, which prevailed in Deerfield, in 1830—31, says, that a child was brought from Amherst, where the complaint prevailed, who had canker about the neck and throat. In two or three days a child who played with this,

was attacked with the disease. In about a week the mother was taken with it. One of the watchers took it, carried it home with her, and communicated it to one of her sisters. These are certainly strong cases in favor of the doctrine of contagion. So far as my own observation extends, however, I have seen no case that would justify me in the belief that the disease is contagious; no occurrence of the disease which cannot be explained upon the principle of its being epidemic. But I am collecting some facts upon this subject, which I will at some future time lay before the Society.

Prophylactics. — Belladonna. This article has, of late, attracted some attention, and gained some repute as a preventive in scarlatina. Dr Polson, of Cleves, tested its efficacy by administering it to 247 individuals. Thirteen of them had the disease, but Dr P. thought it was milder in them than in those who had not used it. Dr Rondholen published a paper in vol. xxvi. of the Edinburgh Medical and Surgical Journal, on the efficacy of Belladonna, as a preventive against this disease. He tried it with success. Dr Cook, whose paper I have just mentioned, says, he embraced the opportunity of trying its effects in guarding families from the contagion. He gave a pill of the extract every night and morning. The effect produced by the pills were similar in all: they slept well, perspired more freely than usual, and had a soft and full pulse. Only seven, however, escaped the disease. He observes, that if it was useful as a preventive, it must be by keeping up a state of action, incompatible with the disease, and that this action consisted in keeping up a full pulse, and a tendency to perspiration in the cutaneous vessels — and that if this is the case, it ought to be not only useful in warding off the disease, but in subduing it when it existed. He accordingly used it in several cases of scarlatina fever, and in all with advantage. It induced sleep, rendered the pulse slower, and produced a perspirable condition of the surface. He thinks it will prove more valuable as a remedy, than as a prophylactic. A gentleman in this city told me had used belladonna in a number of families, but with no advantage, unless it was to mitigate the disease when it occurred. It appears to me the best prophylactics for this, or any other disease, are cleanliness, pure air, healthy food, proper clothing, and a careful protection of the body against all the changes of our variable climate. These will more effectually produce that state of action in the system which is incompatible with disease, than belladonna, or any other drug.

Art. VI. — Cholera in Boston.

[Continued from page 259.]

Case X. — A respectable man, aged 48, — occupation, victualler — lived at No. 75, Elliot street. In early part of the night of 10th Sept. was taken with vomiting and purging, for which he took some domestic remedy, consisting chiefly of a preparation of camphor, and was relieved; rose early on the following morning, and went to his place of business, which was near his house, but was obliged to go home, and was soon found by Dr Bigelow with symptoms of Cholera. He had calomel, camphor and opium administered in combination, and hot applications to the surface, together with sinapisms. Died at 4 o'clock, Sept. 11th. No examination of the body was made. He said that he had had no diarrhœa previous to the attack in the night before his death. The cellar of the shop in which he traded was found to have been very unwholesome, from dampness, and putrid refuse meat, and the drain of the house in which he lived was obstructed and offensive.

Case XI. — An intemperate man, of very irregular habits, 40 years of age — occupation, chaise-maker. He had been working of late, in the same place with the patient in Case vi.; but was taken sick on the 10th of Sept. at the Bite tavern, near Faneuil Hall. He was visited there on the 11th, by the Health Commissioners of the district, and by Dr Adams, who reported him to be in articulo mortis, with all the appearances of cholera. He died before arrangements could be effected for taking him to the hospital. He had been attended by one of the Thompsonian practitioners, who had left the house not long before the commissioners arrived, pronouncing the patient to be out of danger.

Case XII. — A hearty, laboring man, 56 years of age — occupation, bricklayer. He lived in Fessenden's court, was seized with cholera in the night of the 10th Sept. and died at 2 o'clock A. M. of the 12th. He was sick 31 hours; was attended by Dr Randall. Body not examined.

Case XIII. — An Englishman, 45 years of age, by trade a barber, of very intemperate and irregular habits, and of late residing in Elliot street, was taken about 9 o'clock A. M. Sept. 12th, with vomiting, purging and cramps. Had been drunk two or three days, and was occupied the day before about the person of the man in Case x. after his death. Said not to have had diarrhœa before seizure. Admitted to the Northern hospital half past 12 o'clock. Complexion dark, lips and hands livid,

fingers corrugated and damp, pulse 90, scarcely perceptible — had two dejections characteristic of cholera, after entrance. Bled ʒ xxiv. blood flowed freely, dark colored, coagulated slightly, no separation of serum. Had an emetic of ipecac. and antimony, which did not operate — sinapisms to abdomen and limbs, frictions and Ungt. Hyd. Com. to lower extremities.

Died at 2 o'clock — at half past 3 o'clock P. M. spontaneous contractions in muscles of toes.

Autopsy revealed all the usual appearances in cholera subjects, but nothing peculiar.

Case XIV. — A married female domestic, aged 58 — seven days ago had vomiting and purging, with pain in limbs, followed by a feverish state. Has had several returns of vomiting and purging. Sept. 12th, took castor oil, which was vomited, and afterwards took laudanum. Sept. 13th, in morning, had two dejections, light colored and watery, was found about 12 o'clock in Fessenden's court, by Health commissioners, and sent to Tremont street hospital. Then extremities cold, pulse 50, small, very drowsy, respiration heavy, tenderness at epigastrium. Extreme heat was applied to surface, and sinapisms to abdomen and feet, and she took castor oil and compound tincture of Senna. At night, back of neck was vessicated.

Sept. 14th, cupped on both temples. Sept. 15th, last night delirious and violent. ℞ spir. ether, nit. gtt. xx. castor: grs. v. ammoniæ carbon. gr. iv. ft. pil iij. — take one at 1 o'clock, and one at 6 P. M. — 16th, rested well in night, pulse 96, continue ether, &c. She continued to improve under common treatment till the 27th, when she was discharged well.

Case XV. — A dissolute female, 17 years of age, residing at No. 68, Elliot street. Sept. 14th, was visited by Dr Storer, when her countenance was ghastly, eyes sunken, and surrounded with dark areola — hands and feet cold — abdomen soft, no pain produced on pressure, save over uterus — great heat at stomach, and urgent desire for cold water — pulse small, 140 in minute — alvine evacuations liquid, turbid, and without excrementitious matter or smell — micturition in the morning. She was ordered calomel, camphor and opium in combination, sinapisms to stomach and bowels, and frictions with dry heat to surface generally. Sept. 15th was found vomiting, which had exercised her incessantly since 3 o'clock A. M. — has no desire to vomit, no sickness; but the act is wholly involuntary — matter rejected brownish, sometimes like coffee grounds — eyes deeply sunken — voice altered — spasms violent — no urine. At 9 A.M. pulseless; great jactitation; hands and feet violently contracted

with spasms; countenance peculiar; cholera very well marked. Died at 1, P. M. Body not examined.

For the last six months this girl had been an abandoned prostitute, residing in a brothel, where she died. A fortnight before her sickness she was delivered of a five months' fœtus, by an irregular practitioner — suffered little at the time; but has had pain in region of uterus ever since. For the last eight days has had constant diarrhœa. The room in which she sickened, is low, a little beneath the surface of the earth around. It was very damp and chilly.

Case XVI. — Married female domestic, aged 21 — has had diarrhœa last ten days. Sept. 13th, attacked with vomiting and purging, and afterwards took castor oil, and immediately vomited and purged with spasms; took 100 drops laudanum without relief; vomited gruel-like fluid, with some blood. Admitted to Tremont street hospital at 9 o'clock P. M. with spasms and pain at epigastrium.

Bled ten ounces, and had ipecac.; vomited some coffee and other matters; took 40 drops of laudanum, and had a plaster to epigastrium. 14th, rested well; pain in abdomen. Recovered under active purging, and was discharged well on the 19th.

Case XVII. — A female of excellent habits and exemplary fortitude; had passed the Tuesday preceding her sickness, with Mrs Hutchinson, (the patient in Case VIII). She returned to her house in Jefferson street, on Tuesday evening, and felt in usual health on Wednesday and Thursday, except somewhat fatigued.

She awoke on Friday morning at 5½ o'clock, Sept. 14th, with slight uneasiness in the bowels, which soon resulted in a copious evacuation, succeeded in 15 minutes by a second and third. The dejections were watery; the first of a brown color, and the others milky. At 7 o'clock she was able to walk from one chamber to another, and said that she had no pain previous to the evacuations, or at the time, or subsequently; had no nausea, nor any sensation differing from health, except something like faintness at the pit of the stomach. Previous to 9 o'clock, she had more dejections, colorless and watery — at that time vomited a small quantity of colorless fluid, and had spasms in the toes and calves of the legs. From this, she rapidly declined, the pulse becoming extremely feeble, so that before 10, it was difficult to be perceived; perspiration covered the face and extremities, the upper ones becoming cold, and together with the face, assumed a slightly bluish aspect. This state continued with occasional vomiting and purging, until 5

o'clock in the afternoon, when she was without pulse, hands and face cold, quite insensible to external objects, and it seemed probable she would not survive an hour. At this time 6 pints of saline fluid were injected into the veins, which reanimated her; the heart, lungs, brain and skin performed their functions with some energy; but the vomiting and purging continued, and at 10, 5 hours after, her condition was hardly less hopeless than before the operation. It was repeated and continued until about 6 pints were thrown in; but the effects were not so striking, although the pulse was reproduced, and the skin became warm, and continued so for several hours. The vomiting and purging continued, though with diminished frequency, until 5 in the morning, when she became lethargic. At 7, the skin was warm and the pulse distinct, about 140 in a minute. She died at 2 P. M., having been sick 33 hours. No examination of the body was made.

Case XVIII. — A temperate widow woman, aged 41, was seized early in the morning of Sept. 15th, with violent vomiting and purging, with great distress at epigastrium, but no burning sensation. Had had diarrhœa for last six weeks, and was very careless. At 11 A. M. cramps came on in legs, feet, and arms. At 2 o'clock, admitted to Tremont street hospital. Pulse just perceptible; extremities nearly cold; cramps in hands and legs. Was bled ʒ viii.; blood flowed freely at first; blister to epigastrium, to be sprinkled with mustard and water. ℞ hyd. submur. gr. x. Pulv. G. camphor. gi. M. 3 o'clock, sinapisms to wrists, and following powder every 11 minutes, of which she took five. ℞ hyd. submur. gr. viii. Pulv. G. camphor, gr. 1 M. 4 o'clock, surface of body cold and blue. Saphena vein opened, and *thirty ounces* of the following mixture thrown in, viz:—

Sodæ Carbon., ʒ ii;
Sodæ Mur., ℈ ii; at the temperature of 120—130.
Aquæ, ☉i;

The effect of the injection was immediate. The pulse rose to 100 and was full, and the skin took a natural hue. She expressed herself relieved, and from that time had no pain. The improvement of pulse, heat, &c. lasted about one hour. 5 P. M. vomited on taking tea; surface becoming blue again; no pulse. 7 o'clock, vomited, semi-transparent fluid, had difficulty of breathing. Died at half past 8.

Autopsy. — Brain not examined; lungs natural; right side of heart filled with blood not coagulated; aorta large and empty; muscles florid; external coat of intestines very little injected; stomach contained ʒ iii. black fluid, with detached mucous

membrane, and calomel; portions of mucus coat, and large intestines much injected, others soft; ilium less corrugated and inflamed than usual; Payers' glands enlarged; left kidney containing a creamy fluid; bladder not contracted; mucous coat corrugated, and covered with creamy fluid.

Art. VII. — Reduction of dislocated Os Femoris, on the tenth day after the Injury.

Communicated for the Medical Magazine, by J. C. Howard, M. D.

Charles Stetson, aged 35, a carpenter, was admitted into the House of Industry, July 28th. He had been thrown from a cart, ten days previous, by which his thigh bone was dislocated, and he was very much bruised. Upon examination, I found the dislocation was upon the dorsum of the ilium, the limb being shortened an inch and a half, and the knee bent over the sound leg; the foot turned so much inward, that the great toe rested upon the tarsus of the other. The thigh could only be moved inwardly, the trochanter major was high up, and nearer the crest of the ilium than ordinary; and on moving the limb, I could feel the head of the bone rolling under the muscles. On the morning of the 29th, when I first saw him, and ascertained the dislocation, I prescribed a large dose of salts and senna, and determined the next morning to attempt a reduction. Early on the morning of the 30th, the medicine administered the day previous having operated freely, I prescribed antimony, in nauseating doses, with a view to relax the muscular system, and thus facilitate the reduction of the dislocation. As none of the usual apparatus could be procured, I was assisted by Dr Palmer, and a medical student, and four stout men, inmates of the house. I obtained a sheet, which being folded lengthways, was passed under the perinæum, putting it obliquely over the shoulder of the opposite side, and there secured by a strong line, by which means counter-extension was kept up. A cotton padding was wound above the patella of the affected limb, and over this, a soft napkin. A stout cord was then fastened over the padding, by which extension was made, and which, when carried to the proper degree, with a slight rotation, the muscles pulled the head of the bone into the socket. The dislocation was reduced in less than three minutes, and was an illustration of the truth of the old proverb, that "necessity is the mother of invention."

Art. VIII. — The Physicians' Case Book.

This book, which is a republication from an English edition, may well be recommended to every physician. In it one may report in a small space and uniform manner, a great number of cases. By using it there is a twofold benefit. In the first place, we thereby treasure up for the future use of ourselves and others, a valuable collection of medical information. This is no small consideration; but in a second respect the benefit is incalculable. I mean the immediate personal improvement, especially for young practitioners. When we are examining a case, with the understanding that it is to be exhibited in black and white, we are much more likely to be careful and thorough in investigating it. We do not rest satisfied with faint and general ideas, such as cannot be retained from one visit to another: we are not satisfied with prescribing to meet a few symptoms today, cautious lest tomorrow's symptoms may contradict today's decision. Every scientific and thinking physician does or ought to have his Case Book: but we are confident it is much more seldom used than comports with his own advantage, or with that of his brethren and the community. We believe that Messrs Allen & Ticknor have done much to remove the reluctance one feels in sitting down to record a case, by publishing these blanks, prepared to his hand in so inviting a manner, by some one who evidently employs as well as recommends them. The only deficiency we see in them is, that no space is allotted for morbid appearances. This could not be done, it is true, without rendering the book much more cumbersome, and perhaps sufficient room may be found in the columns marked History and Reports. But the neglect of a physician, in the present age, to obtain post mortem examinations and to note the appearances of every interesting case, we should consider almost unpardonable. We cannot tolerate the man, wherever he may be placed, who appears to have so little zeal in his profession, or who may be so ignorant of the healthy and morbid appearances of the human body, as to shun an examination, either because it causes him trouble, or because it will expose his ignorance. It is idle to pretend that examinations cannot be obtained: for it is unquestionable that, with proper management, a majority of cases, whether in city or country, might be examined. This is the only sure means we have of testing our diagnosis, or of enabling us to gain such an idea of disease in parts concealed during life, that we may see them, as it were, placed before our eyes; and for this the means are competent.

The book contains a sheet presenting a plan for the systematic examination of a patient. Some such plan should be pursued by every one. Less time will actually be occupied: a clearer idea of the case will be gained: and by always pursuing the same course we are not liable to omit important points, and may always know when our examination is completed. Whether the plan suggested be the best or not, we will not presume to decide. We think, however, that it might be somewhat simplified. Every one is of course at liberty to generalize the table, or to select such parts of it as he deems expedient.

INTELLIGENCE.

☞In future numbers we intend to keep open the third sheet of the Magazine as long as possible, in order to introduce the latest items of Medical Intelligence, — short articles of this kind, will find a place, if sent to the Editor as late as the eighth of the month, — six days previous to the publication. E.

The British Anatomy Bill was read a third time, and passed on Thursday, 19th July, in the House of Lords — 29 to 9. It is encumbered with a provision requiring the interment of every body which it surrenders, after dissection, in such absolute and unequivocal terms, as to render it far less valuable to the anatomist than the Massachusetts Law, which was the first example of enlightened legislation on the subject, in the English language.

The late London journals inform us that the Cholera was on the increase in that metropolis when they were issued.

The Lectures in the Medical Department of Harvard University, commenced on the 15th ult., with a very respectable class, about eighty in number. The course was introduced by Dr Jackson, with a lecture on Physiology. We understand that the arrangements which had been made with Dr Lewis to relieve the Professor of Anatomy in a portion of the arduous duties of his chair, were found not to be conformable to the statutes of the University, and therefore have been dispensed with. The students, however, are still to have the advantage of that gentleman's private instructions in practical anatomy.

A correspondent has requested us to call the attention of the members of the Boston Medical Association to the *sixth article*

in their "Rules and Regulations." We comply with his request by republishing the rule, observing only that we believe his interpretation of it to be correct — that it was intended to forbid professional intercourse with all irregular and quackish practitioners, whether licensed or unlicensed, established or *itinerant.*

"VI. No member of this Association shall consult with or voluntarily meet in a professional way, or aid or abet any practitioner resident in this town, who is not a member of this Association."

The Cholera has entirely disappeared for several days past, in Boston, and at present (Nov. 12th) no case of it is known to exist here.

We have received a valuable pamphlet on Cholera, published by Dr Edward Warren, of this city. It is a collection of facts and circumstances attending the introduction and progress of the disease in every city and important town on the continent, where it had appeared previous to the time of this publication. It must have cost the author no little time and labor, and if he has succeeded in getting *facts* in all cases, he will deserve the grateful acknowledgments of all who are anxious to obtain the materials, for a correct knowledge of the natural history of Cholera.

A formidable operation was successfully performed on Saturday last, at the Mass. General Hospital, by the Senior Surgeon of that institution. The disease was fungous enlargement of the clavicle, of malignant character, and involving a large part of the bone. The entire clavicle was removed, except a small portion of its scapular extremity, and no injury inflicted on any of the important organs in its vicinity. We shall, doubtless, have the privilege of reporting the case at length, in a future number.

Dr Gasper Spurzheim died at his lodgings, in Boston, on Saturday evening, Nov. 10th, at 11 o'clock, of typhus fever. The advanced state of the present number of the Magazine, forbids us to add anything to this melancholy announcement, except to inform the public that arrangements have already been made by his medical and scientific friends, to have the rites of sepulture administered to his remains, with suitable demonstrations of that deep and affectionate respect for the distinguished philosopher, and estimable man, with which his short sojourn among us had inspired our whole community.

COLLECTANEA.

Emphysema occurring in a Consumptive Patient, after the Application of Leeches on the Parietes of the Chest.

Martin Forgette, a husbandman, twenty years of age, and of a delicate constitution, was admitted into the Hospice de Chinon on the 12th of December 1831. He suffered from an affection of the chest; had had cough for more than six months, the sputa purulent, and often mingled with blood. A violent fever reduced him greatly; and percussion and auscultation left no doubt that tuberculous phthisis was present, and that the left lung was more especially diseased. The man, previous to his admission, had oftentimes suffered much from intense pains in the chest, which now returning, and the right side being most acutely affected, six leeches were, on the ninth of January, ordered to be applied, and the application was followed with decided relief. But the same evening a notable swelling of the thoracic parietes was perceived, which, beginning on the side where the leeches had been applied, rapidly spread to the other, and quickly extended to the neck and face, and became so serious as greatly to alarm the patient, and threaten him with immediate suffocation.

The diagnosis was easy: the elastic tension of the integuments of the chest, distended both on the sides and in front, sonorous on percussion, and crepitating under pressure, proved that the sudden tumefaction was due to an escape of air, or a development of gas, in the subcutaneous cellular tissue.

Cupping glasses were applied over the leech-bites, but without any good effect: frictions were also instituted.

January 11, MM. Lafon and Gendron met in consultation, and decided on evacuating the effused fluid by several punctures. The gases escaped with a slight hissing noise, and forming little bubbles: and the discharge was rendered more free by directing the pressure towards the punctures which had been made. Notwithstanding what was done, the patient felt very little relief, and the emphysema extended to the abdominal parietes, and also to the arms and legs.

January 13. Scarifications were again resorted to, and the punctures being deeper, the swelling was very considerably reduced, and completely disappeared in the course of four days: but the patient's state became more and more hopeless each succeeding

day, and his respiration more and more laborious. On the 26th of January, he was himself conscious of his approaching dissolution, saying to the attendants that day would be his last, and towards the evening he died.

The autopsy shewed considerable derangement of the thoracic viscera. Numerous adhesions were found uniting the pulmonary and costal pleuras, especially on the left side: false membranes hung from many parts, and appeared to be filled with bubbles of air. The left lung was hepatised and studded with tubercles, and contained several vomicæ of which the largest was towards the apex. The right lung still crepitated throughout a considerable part of its extent, but it likewise was tuberculated, and contained several cavities, though of less size. The pericardium was filled with a yellowish serum. The heart larger than in a healthy state.

To what cause can we attribute the emphysema here observed? Should it be regarded as of spontaneous origin, or as solely due to the leech-bites? May we not believe that a rupture had occurred in a violent paroxysm of coughing, (and the subtraction of blood, in lessening the strength of the cohesions, might have favored it,) the pleura pulmonalis and the pleura costalis being united, and forming, as it were, one of the walls of a tuberculous excavation; and that, by this opening, the air entering the lung became extravasated into the exterior cellular tissue; and thus, that the emphysema was produced? As to the false membranes, so dense and highly organized, may we not consider them as an admirable effort of nature to repair the deranged structure; and, in a state of organization more perfect, might they not act in concurrence and as a kind of appendages to the lungs?— *Gazette Medicale.*

Case of Chronic Hydrocephalus cured by Puncture.

By Professor Graefe of Berlin.

A child, whose head had from its birth been preternaturally large, but who was otherwise healthy, was, at four months old, admitted into the University Hospital at Berlin: it was then pale without being emaciated, and well made. The head, however, showed symptoms of chronic hydrocephalus; the face was small in comparison with the cranium; the hair was fine, light-colored, aud very thin; the fontanels were widely open, and the sutures unclosed; the bones of the skull mobile, thin, and little advanced in their ossification: the greatest circumference of the head was eighteen inches and a quarter: fluctuation could be perceived everywhere, and especially at the anterior and pos

terior fontanels; when pressure upon one of which was made, the other presented a hard translucent tumor. Not any of the remedial means employed had the least salutary effect, and hence M. Graefe determined to try whether puncture would afford relief.

Having compressed the great fontanel so as to determine the fluid towards the small one, he introduced a moderately-sized cataract needle, at first vertically into the fontanel close to the side of the bone, and then, giving it an oblique direction, carried it onwards about a third of an inch. The liquid, which was viscid, dropped out but slowly; the operator, therefore, withdrew the cataract needle, and introduced in the same way a fine trocar, and, as soon as the canula was opened, a transparent yellowish brown fluid gushed out in a free stream. In about half a minute the canula was closed, with the intention of subsequently reopening it after the lapse of a few minutes, which was done several times, the skull being, during the whole period, gently compressed by the hands of an assistant applied on either side. When twelve drachms of the fluid were discharged, the infant's eyes became suddenly dull, the pupil contracted, the countenance pale and altered, and the action of the heart and the pulse more feeble. The canula then was immediately withdrawn, the wound closed, and the head compressed by the application of straps of adhesive plaster.

These symptoms did not disappear for several hours, notwithstanding the exhibition of stimulating medicines, which were prescribed, and the child remained restless, slept little for the two following nights, cried much, and took the breast but seldom.

The same symptoms occurred after each subsequent operation, but it was found that the child became completely restored in from about ten to fourteen days. At first only about twelve drachms were evacuated after each puncture, subsequently twenty were discharged. Between the earlier times of operating, the little patient took, morning and evening, the eighth of a grain of calomel, and the sixteenth of a grain of foxglove; but this powder causing nausea, it was changed for two or three grains of calomel with magnesia, to be taken twice a day, two or three times a week, the head being bathed assiduously with squill vinegar and water, just warm; for after cold applications, which were tried several times, the infant was always uneasy, pale, and faint, insomuch that convulsions were feared. The head diminished in diameter two or even three lines after each operation and by degress the dimensions of the skull were reduced to a conformity with the face and the rest of the body. The fluctuation, and the mobility of the cranial bones diminished; the sutures closed, and the general state of the patient was improved. The punctures were repeated eleven times at the following pe-

riods during the year 1829; viz. the 8th, 15th, and 23d of January; 19th of February; 5th and 19th of March; 19th and 27th of April; 5th and 17th of May; and 23d of June. The liquid evacuated became thicker and more coagulated towards the end. After the last operation on the 23d June, no further fluctuation was perceived; the little fontanel and all the sutures were closed, the great fontanel alone remaining slightly open. The child grew, and even after the third operation it had already a better appearance, and after the ninth it began to articulate certain words, and also to walk: at ten months old it ran alone, and spoke as well as children of that age usually do. At the end of June, its head measured in the greatest circumference eighteen inches and three quarters.

On the 26th November, 1830, the child being then two years and a half old, was alive and well, and was presented to the Society of Medicine at Berlin. — *Graefe and Walter's Journal der Chirurgie.*

Case of Propagation of Ringworm by Contagion.

M. Collineau communicated to the Académie Royale de Médécine the following fact. In an establishment which contains between eleven and twelve hundred females, there is a particular department appropriated for the reception of girls from ten to sixteen years of age, in which they have communications only with each other, and with the persons intrusted with the care of them. In the month of August, 1831, a child with a ringworm on her shoulder, about ten or twelve lines in diameter, was admitted into this establishment. Two months afterwards, one of her companions had a similar ringworm on her arm, and also on her left cheek. At the end of four months, the greater part of the others were affected with the same disease, attacking the arms, thighs, neck, hands, &c. By the 7th February, no more than three out of seventeen remained who were exempt from the disease, and of these one subsequently, as well as the matron, was affected.

It is impossible, observes M. Collineau, to doubt that these ringworms were communicated by the child admitted into the establishment in the month of August, as previously there were no affections of that kind in the house, and as the dormitory in which she slept was the only one affected. The situation is healthy, and the diet good. The author in reporting these cases of contagion, does not the less acknowledge the rarity of the communication of scaly cutaneous diseases. — *Archives Gén.*

Observations on the Obstetric Operation of Turning.

By Thomas Radford, Esq. Senior Surgeon to the Manchester Lying-in Hospital and Dispensary for the Diseases of Women and Children.

The operation of turning is not limited in its application to one case, but is essentially demanded, and affords the only safe means of rescuing the female as well as her offspring from impending danger in a number of accidents occurring during birth. One method, if duly established as the best, will answer in all cases to which this operation is applicable.

The operation of turning, as at present practised, consists in dilating the os externum, vagina, and os uteri, passing the hand into the uterus, searching for one foot, and then for the other, bringing down the feet to the os externum, and forthwith extracting the child. If the difficulty is very great in finding both feet, we are then allowed to content ourselves in bringing down one foot only.

The presentations of different parts of the child's body ascertained during labour, before the os uteri is dilated, are not all equally safe to the mother or the child. Presentations of the vertex are accepted as natural, because they are the most frequent, the most safe, and are capable of being accomplished by the unaided powers of nature. The different presentations of the head constitute varieties, but are nevertheless more safe both to the mother and child than any other. The presentation which ranks the next in point of safety is the breech, after which are placed presentations of the lower extremities. In labours where the trunk, or superior extremities of the child present, the process cannot be completed by the natural powers, except in those rare cases where spontaneous evolution takes place. If the mother were left to her own powers unaided she would inevitably perish, and also her offspring.

In these cases, therefore, manual assistance becomes necessary. The practice is evidently that of changing the position of the child, so that the natural powers of the mother may accomplish its expulsion, or that it may be delivered by the accoucheur. The means most desirable to adopt in such cases, would be, if possible to change the presentation to that of the head, this being the safest and most natural. This practice was inculcated and attempted by the older writers, but cannot be put in execution, from the inability to seize a body of such magnitude as the child's head, so as to bring it to lie over the os uteri. As the breech is the presentation next in point of safety, we might on this account be induced to seize this part to effect a change of position, but the same objections exactly apply to this as to the attempt at bringing down the head. We are therefore re-

duced to the necessity of adopting the present practice of bringing down the feet. A superficial view of these cases might lead us to the conclusion, that if it were possible to effect a breech presentation, little comparative advantage would be obtained over bringing down the feet. But the results of practice prove, what might be inferred by reasoning, that the child's life is much more frequently preserved in those cases in which it presents the breech, than where the feet come down first. The measurement of the child round the hips and thighs, when the latter are turned up towards the belly, as in breech cases, approaches nearly to the circumference of that portion of the head which lies parallel with the pelvic cavity in natural labor. The dilatation of the os uteri and os externum is effected so completely by the passage of the breech, that very little resistance is offered to the expulsion of the head, or a dexterous extraction of it, if the umbilical chord should shew signs of compression hazarding the life of the child. But this is not the case in presentations of the lower extremities ; the child in this case descends in a wedge-like form, constantly presenting an increase of measurement in the successive parts of its body; which parts, in comparison with the head are rather more yielding. At the time the head, which presents the greatest circumference, enters the pelvis, compression of the funis takes place, and if the cervix and os uteri are not sufficiently dilatable, which is most generally the case, especially in first labors, the child will be lost. The attempt to bring the child rapidly through the pelvis has a tendency to increase the opposition by inducing a spasmodic action of the cervix, which, coupled with the inadequate dilatability of the os uteri, becomes *pro tempore* an insurmountable barrier to the extraction. Is there, then, no practice which would enable us to bring down a part, approximating in its measurements to that of the breech presentation which we have already stated to be so safe to the child, but which cannot be effected ? There is, and this practice consists in never bringing down more than one foot in the manual operation of turning the child.

The propriety of this practice may be shown by considering the greater safety of breech presentations over those of the feet, and comparing the measurements of the breech with the thighs flexed upon the pelvis with that of the head. If, as above stated, we are not able to effect a breech presentation by the hand in utero, that operation which produces a presentation possessing a measurement nearest to it is the one we ought to prefer, and this consists in bringing down one foot only, leaving the other, which would become turned up to towards the abdomen of the child, thus producing a presentation compounded of the breech and one lower extremity. The circumference of the hips in this posi-

tion of the parts varies very little from that of pure breech cases, and must consequently be attended by nearly all the advantages of such a case. In considering this subject, it will be desirable to attend carefully to the subjoined measurements, which have been accurately obtained from children born at the full period of gestation. The circumference of that portion of the head which presents in labor is from twelve to thirteen and a half inches. Ditto, of the breech with the thighs turned upwards to the belly, as in breech presentations, from twelve to thirteen and a half inches. Ditto, with one thigh turned upwards to the abdomen, the other extended, from eleven to twelve and a half inches. Ditto, of the hips, the legs extended as in feet presentations, from ten to eleven and a half inches.

These measurements prove several points. 1st. That breech cases differ very little in their power to dilate the passages of the mother as extensively as the head, and therefore that whenever the breech passes, we may expect the head to pass with moderate ease, either by the natural efforts or by judicious artificial aid. They also show, 2dly, That when one thigh is turned up towards the abdomen of the child, that the measurement is very little less than that of the presenting part in pure breech cases, and therefore that we may expect the head to pass with nearly as much ease as in those cases.

3dly. That where both feet are down, the measurement of the hips differs so much from that of the head as to be insufficient to accomplish that dilatation of the soft parts which will allow the head to pass, or be extracted with sufficient celerity to save the child, when its life is threatened by the compression of the funis.

The foregoing observations authorize the conclusion, that in undertaking this operation we should make it a positive and invariable rule never to bring down more than one foot or one knee.

Whenever any such circumstances occur during labor, as large hemorrhages, preternatural presentations, &c, for the relief of which we adopt the practice of turning, the uterus will be found in one or other of the following conditions : either fully distended, the liquor amnii not having escaped ; or more or less contracted upon the body of the child, the liquor amnii having been discharged. In the first class of cases the operation is effected in a short space of time with great ease to the practitioner, and with comparative safety to the mother and the child. In the second class of cases, where the liquor amnii has escaped, and the contraction of the uterus is more or less powerful and closely embracing the child, the difficulties and dangers of turning manifest themselves. In these cases we are recommended to bring down both feet ; but if we find great difficulty in doing so, to content ourselves by bringing down one foot only.

The interrogatory is naturally suggested by this last sentence, Why? The answer to which is, because it is more easy and more safe to both mother and child to do so. In rules given by authors for the management of these cases, we are restricted to the operation most complex to the practitioner, most difficult to the mother, and most dangerous to the child, for the relief of that class which are of easy accomplishment; whilst we have the option only of adopting the most easy plan in the most serious and difficult cases.

In all cases, when the liquor amnii has been discharged, it is our special duty to bring down one foot only. If but a short time has elapsed since this occurrence, the case will still maintain a favorable aspect, the presenting part will not be wedged in the superior aperture of the pelvis, the uterus will not be powerfully contracted upon the body of the child, and the operation of turning may be accomplished with moderate facility and additional safety by bringing down only one foot.

But when the liquor amnii has been long evacuated, the case assumes a different character; the presenting part is wedged firmly in the superior aperture of the pelvis, the uterus is powerfully embracing the body of the child, the os uteri is hard, tumefied, and indisposed to dilate. The hand of the operator is impeded by the arm of the child at the os exturnum, and all the parts exposed to the mechanical influence of pressure, have sustained injury from the long-continued but ineffective action. In such cases we should never contemplate bringing down two feet, not abandoning this plan, because we cannot find, or cannot secure the second foot, but should make the principle of our operation the bringing down of one foot only; and where the contraction of the uterus upon the child's body is so strong as to create difficulty, we should not search for the foot provided we can secure and bring down one knee; for as the knee is brought down, the foot will descend and come within reach, so that it may be seized and brought through the os uteri with facility. In such a condition of the organs, it is evident that every rule which has a tendency to lessen irritation and soothe and subdue the morbid sympathies, abundantly excited by the pressure of the child, and the manual movements of the operator, is of the most vital importance to the female. Great caution should be observed in the mode of introducing the hand not only through the os uteri but along the vaginal canal; it is also of great consequence to attend to the length of the period during which the hand remains introduced. In accordance with the principles so frequently urged, it will be manifest that the evolution of the child, and the easy recession of the presentation, will be better accomplished by not accumulating too great a bulk upon this part at the os uteri. These extreme cases of difficulty in turning are

most commonly met with in preternatural presentations neglected in the early stages, and often attendant upon the practice of females. I have never yet met with a case where the liquor amnii has been evacuated for more than twentyfour hours, where the difficulty of turning was not increased by a strong circular band of uterine muscular fibres, which embraced closely and firmly the lower part of the chest and the abdomen of the child, leaving the breech and inferior extremities in a kind of chamber at the fundus; the head, shoulder, and inferior extremities lying beneath, and the presenting part protruding through the os uteri, which is partially dilated. The practice before stated I have the more confidence in recommending, as it corresponds with the views of my valued relative Mr Wood, whose opportunities of observation in this department have been most extensive, and such as rarely fall within the sphere of one individual.

I have purposely omitted entering into a detail of the several preliminary measures calculated to facilitate the operation; the rules regulating the choice of the hand; the mode of proceeding to turn; the several steps in the extraction of the child, and also the consideration of the practicability of turning in all cases. These may perhaps form the subject of a future communication. — *Edinburgh Med. and Surg. Journal.*

Acupuncture.

The following account of a remedial agent as yet but little if at all in use in this country, is from the pen of the accomplished Dr Elliotson, physician of St Thomas's Hospital, and is found in the FIRST PART of the Cyclopædia of Practical Medicine. E.

The passing a needle into the body for remedial purposes, is termed *acupuncture.*

The most obvious purpose of this operation is to allow the escape of the fluid of œdema or anasarca through the skin, or of the blood, when superficially accumulated; but, from an idea that various disorders arose from the confinement of a kind of subtile and acrid vapor, it has been resorted to by the Chinese from time immemorial, for the purpose of allowing this vapor to escape. From China the practice spread to Corea and Japan, where it has for ages been very common.

Ten Rhyne, a medical officer in the East India Company's service, in 1679, gave the first information to Europe of a practice unknown to the Greeks, Romans, or Arabians; and states that a guard of the Emperor of Japan, appointed to conduct the English to the palace, was seized with violent pain of the abdomen and

vomiting, after drinking a qauntity of iced water when heated: he took wine and ginger in vain; and then, persuaded that he had wind, had recourse to acupuncture in the presence of Ten Rhyne. It appears that the Japanese are liable to a violent kind of colic, called *seuki*, which they regard as too severe to arise from morbid matter in the cavity of the intestines, and ascribe it to something morbid in the parietes of the abdomen, the omentum mesentery, and substance of the intestines, converted by its stagnation in these parts into a vapor, the escape of which from its narrow prison by means of acupuncture, is immediately followed by a cessation of the pain and distension. The guard laid himself upon his back, placed the point of a needle upon his abdomen, struck its head with a hammer, once or twice, to make it pass through the skin, rotated it between his fore-finger and thumb, till it entered to the depth of an inch, and then, after thirty respirations, as it would appear, withdrew it, and pressed the punctures with his fingers to force out the imaginary vapor. He made four such punctures, and was instantly relieved.

The needles are always made of the purest gold or silver, (gold being preferred,) well tempered. Their manufacture is a distinct occupation, understood by few, and those few are licensed by the emperor. Some are fine, about four inches in length, with a spiral handle for the purpose of more easily rotating them; and are kept, by means of a ring or a piece of silk thread, in a groove at each side of a hammer. This is usually made of the polished horn of the wild ox, ivory, ebony, or some other hard wood; it is rather longer than the needle, and has a roundish head, covered, on the side which strikes, with a piece of leather, and rendered heavier by a little lead within. Others are of silver only, still finer at the point, but with a short thick handle bent down upon itself, and are kept, several together, in a varnished wooden box, lined with cloth; these are not struck with the hammer; but a fine copper canula, about an inch shorter than the needle, is sometimes employed to steady it, and prevent it from entering too far. The selection of the part fit for the operation, or for the application of the moxa, the other great remedy of the Japanese, is usually confided to particular persons called *Teusasi*, touchers or searchers of the parts, while those who apply the needles are styled *Faritate*, needle prickers, though occasionally the common people trust to their own experience, taking care that no nerve, tendon, or considerable blood-vessel is pricked. The seat of the cause of the symptoms is the proper part for the insertion of the needles, and delineations of the body are sold conveying this information.

If the patient does not bear the needle well, it is at once withdrawn; but if he does, and the disease proves obstinate, it is introduced two, three, four, five or six times. The more severe the affection, and the stouter the patient, the deeper must be the puncture.

Kœmpfer, a physician, who accompanied a Dutch embassy to Japan, in 1691, and again in 1692, informs us that, in cases of colic, the Japanese make nine punctures, in three rows, half an inch from each other, in the region of the liver, and that he frequently had witnessed the instantaneous cessation of the pain, as if by enchantment.

The orientals do not, however, employ this operation in affections of the abdomen only. In tetanus, convulsions of all kinds, apoplexy, gout, rheumatism, swelled testicle, and gonorrhœa, and in fevers, both intermittent and continued, it is also celebrated among them; like all remedies of undoubted efficacy in certain diseases, obtaining credit for power which it does not possess over others.

From the alarm excited by running needles into the flesh, and the high improbability of any benefit from such a practice, a hundred and seventeen years elapsed before any European practitioner made trial of it. Dujardin, in his Histoire de la Chirurgie, and Vicq-d'Azyr, in the Encyclopédie Méthodique, mentioned it above a century after Ten Rhyne had published, but only to congratulate the world that the statements of Ten Rhyne and Kœmpfer had not induced any one to practise it; and the first European trials were made by Dr Berlioz, of Paris, in 1810. Its power proved so extraordinary that he employed it very extensively, and numerous French practitioners imitated his example with the same results. A body of similar English testimony followed, and acupuncture affords a striking instance of a good remedy discovered from groundless hypothesis, and condemned without a single trial for above a century.

The diseases in which the power of acupuncture is well established are, pain and spasm, not dependent upon inflammation or organic disease, rheumatism of the nerves, (rheumatic neuralgia,) as distinguished from that chronic form which is generally limited to a small extent of nerve, lasts a great length of time, and is independent of cold, the invariable cause of rheumatism. In rheumatism of the fleshy parts, in simple pain of any spot, and in spasmodic and convulsive pain of various parts, whether local or migratory, acupuncture is decidedly beneficial, provided inflammation be not the cause. Of 129 rheumatic cases treated by Dr Jules Cloquet, about 85 yielded to acupuncture. Of 34 published by others, 28 were cured. The writer of this article employed it in St Thomas's Hospital, and published his results in the form of postscript to a paper upon the utility of the sulphate of copper in chronic diarrhœa, in the 14th volume of the Medico-Chirurgical Transactions. Of 42 cases, taken in succession as they stood in the hospital-books, 30 were found to have been cured: and the remaining twelve had clearly not been adapted for the remedy as either heat of the affected parts had existed, or heat had aggra-

vated the pain. Experience has fully confirmed the fact that, if rheumatism be at all inflammatory, be accompanied by heat, or aggravated by a high degree of heat, even though a moderate degree do not aggravate the pain, no relief is in general to be expected from acupuncture. The omission of this distinction and of a little trouble to make it with nicety, will be the chief cause of the operation proving unsuccessful in rheumatism.

In some cases of inflammation and organic diseases, however, when pain has been felt apparently disproportionate to those affections, acupuncture is said to have afforded relief.

The pain both of rheumatism and of some nervous affections has occasionally shifted its seat on the application of the needles; but the pain in the new situation has generally yielded to their insertion. Sometimes, however, it required longer chasing from part to part before it vanished.

The needles employed in Europe are of steel, long and fine, and furnished with either a knob of sealing-wax at their head, or, what is more convenient, a little handle of ivory or wood, screwing into a sheath for the needle. They are best introduced by slight pressure, and a semi-rotatory motion, between the thumb and forefinger, and withdrawn with the same motion. The pain is comparatively trifling, often scarcely felt.

The operation may be performed in muscular, aponeurotic, and tendinous parts; and the needle introduced to the depth of from the fourth of an inch to two inches, according to the thickness of the muscles. We should not advise it to be passed into viscera, articulations, or blood-vessels. In general no fluid escapes when the needle is removed; but now and then a small drop of blood follows; and in one case which came under our own observation, when the needle had been introduced into the pectoral muscle, blood spirted forth, but it was immediately restrained by gentle pressure, an occurrence, in every respect similar to what once happened in the practice of M. Bretonneau.

M. Bretonneau says that he has passed needles into the cerebrum, cerebellum, heart, lungs, stomach, of sucking puppies, through and through, and in all directions, with no sign of pain nor particular ill effect; unless when too large a needle was thrust into the heart, and in one instance of this, a little extravasation took place into the pericardium. So far from fearing to acupuncture the heart, Dr Carraco would have us do so in the worst cases of asphyxia. He declares that, in the presence of several persons, he kept several kittens under cold water till they were apparently dead,—stiff, motionless, frothy at the mouth, without pulsation of the heart,—and regularly sunk to the bottom every time they were thrown into the water again; that he passed a needle into the heart: that soon the needle began to be gently agitated, then rapidly so, and one voluntary motion after another gradually re-

commenced, till life was fully re-established; and that the animals did as well afterwards as if nothing had happened.

Death, however, by acupuncture of the brain or spinal marrow, as a secret mode of infanticide, is notorious in works on State-Medicine. "Guy Patin relates that a midwife was executed at Paris who had murdered several infants, at the moment their head presented at the os uteri, by passing a long and very fine needle into the brain through the temple, the fontanelle in the nape of the neck, or into the heart and its large vessels. Alberti and Brendel quote similar examples. In the *Causes Célèbres* we read the horrible story of a woman who, towards the middle of the last century, made it her business to murder all the new-born infants that fell into her hands by *acupuncture*, practised at the beginning of the vertebral column, or in the brain, *with the sole intention*, she told the judges, *of peopling heaven more and more.*" *Fodéré, Traits de Médecine Légale:* t. iv. p. 492.

The period during which the needle remains in the part is a matter of great importance. The pain may indeed cease instantaneously, but more frequently not till the needle has remained some time; and our own experience accords with that of others, that if one needle be allowed to remain an hour or more, the operation is more efficacious than when several are inserted, and speedily withdrawn. We usually allow them to remain one or two hours, and have known instances in which they were not removed for twentyfour hours, and no ill consequence resulted. We have usually found the operation requisite a second time, and in one case, lumbago, the pain did not yield till the ninth repetition.

The modus operandi of acupuncture is unknown. It is not accounted for by fear or confidence; since those who care nothing about being acupunctured, and those who smile at their medical attendant for proposing such a remedy, derive the same benefit, if their case is suitable, as those who are alarmed and those who submit to it with faith. Neither is it explained on the principle of counter-irritation; since the same relief is experienced whether pain be occasioned by the insertion of the needle or not. Galvanism likewise fails to explain it; because, although the needle frequently becomes oxidated, and affords galvanic phenomena while in the body, these phenomena bear no proportion to the relief afforded by the operation; besides, that they are observed when acupuncture is practised upon a healthy person, and do not take place when needles of gold or silver are employed, which, however, are equally efficacious with needles of steel.

Acupuncture has been successfully employed to remove the fluid of œdema and anasarca. In these cases the needle does not require to be passed deeply; its point has merely to go through the cutis. As soon as this is done, and the needle withdrawn, a small drop appears at the puncture, which augments till the fluid

runs down; and the oozing will continue for a longer or shorter time, generally for some hours, occasionally for a few days, and even after death, should that event take place. Any number of punctures may be made. Although the puncture is so minute, it is, in such cases, not devoid of danger, any more than scarification, if practised below the knee. The writer of this article has frequently had recourse to it with great advantage in œdema of the scrotum and penis, frequently along the trunk, and the whole length of the superior extremity, and on the posterior part of the thigh, but never knew the least inconvenience follow. Several cases have however, been related to him, in which sloughing, and in some of which fatal sloughing, resulted from its performance below the knee, even though the needle had been passed merely through the cutis. Before these cases came to his knowledge, he had acupunctured the leg, and even the foot, in dropsy, and never but once saw any inconvenience, and that was merely a suppuration at each puncture.

It is evident that, in such instances, acupuncture removes an effect only; besides, that in a considerable proportion of cases of dropsy, the effusion is the result of an inflammatory state, or of sanguineous congestion; by lessening or removing these, by general or local bleeding, and by purgatives, means which have also a direct tendency to excite absorption, we shall perceive that the cases of dropsical effusion in which acupuncture is required, are comparatively few.

Amaurosis from Exercise of the Eye on Minute Objects.

It cannot be denied that defective vision is occasionally produced by exposure to this cause; but when it is recollected that thousands, nay, millions, are thus exposed, in a greater or less degree, some doubt may be permitted as to its operation, especially when sufferers in this way are exposed to other causes which affect the health generally. Students, scriveners, printers, engravers, microscopic observers, watchmakers, gilders, furnace-workers, and cooks, are enumerated among the sufferers from this cause. But there are sedentary or unhealthy employments calculated to impair the functions of many organs, and in this way alone to produce that state of the retina which accompanies the disease. Simply using the eyes constantly in intently viewing minute objects, although such objects should not reflect any unusual quantity of light, appears to impair vision as much as working on brilliant objects; at least we find as many cases of impaired vision among tailors, scriveners, shoe-makers and cabinet-makers, as among engravers, gilders, glass-blowers, or cooks. The question which it is here important to solve, is, what is the state of the retina in these cases? Is it a state of excitement with

morbid sensibility and increased vascular action, a state approaching to inflammation? or is it the very reverse, a state of impaired sensibility and defective vitality? Until these questions are solved, impaired vision, from these causes, cannot be positively referred to the division of functional amaurosis more correctly than to the organic. It has already been stated that Mr Lawrence considers amaurosis of this character to depend upon inflammatory action, or "vascular activity, whether designated as fulness, turgescence, determination, congestion, or as inflammation in its most limited sense."

The symptoms, in cases of this description, are merely impaired vision, disabling the patient from following the usual pursuits of reading or working; muscæ volitantes, or spectra, of various colors, forms, and qualities, floating before the eyes; and a fixed or sluggishly acting pupil. It does not appear that the symptoms are materially different, whether the disease has arisen from exercise of the eye on brilliant objects, or on objects merely minute.

Whether it may be advisable to rely upon a treatment directed to the improvement of the functions of the digestive organs in amaurosis, from these causes, must be very questionable. The principal reliance must be placed in the removal of the original remote cause. The patient should understand that no remedies can avail while he continues to exercise the eye as before. There can seldom be much difficulty in accomplishing these objects, when the patient does not depend for a livelihood upon the exercise of his eye; but the poor artisan often has only the alternative between starvation and blindness. Under such circumstances, every argument should be used to induce the patient to give up his trade for a summer, and to endeavor to earn his bread by rural occupations. The most careful inquiry and examination must be made to ascertain whether there be any evidence of the existence of inflammatory action or vascular turgescence in the retina. The history and progress of the case, the appearance of the sclerotic and pupil, the constitution and habits of the patient, must be the best guides. The practitioner could not reasonably determine to adopt an antiphlogistic treatment with a sallow, pallid, emaciated patient, whose eyes present no unusual vascularity; while it might be imperiously demanded in a bloated, gross man, of intemperate habits, and whose eyes are disfigured by vascularity. If it be necessary to adopt the antiphlogistic plan, it is to be followed up as detailed when speaking of inflammation of the retina, and recourse had to the administration of mercury to the same extent. If the digestive organs are impaired in function, they must be improved by the usual means. If there is no evidence of inflammatory action, but, on the contrary, a languid circulation and general debility, every method calculated to improve the general health must be adopted, as pure air, invigorating diet,

and tonic medicines. Blistering and other stimulating applications in the vicinity of the orbit, and pungent applications to the nostrils, and even to the conjunctiva itself, may be found of service

ARTHUR JACOB.

ANEURISM CURED WITHOUT OPERATION.

"John Miley, ætatis 27, was admitted with a circumscribed false aneurism of the brachial artery in the bend of the arm, produced by puncture in *venesection* (?). *He stated, that thirteen days previously*, in order to procure relief from a cough which he labored under, *he permitted a blacksmith to abstract blood from his arm.* During the operation he was struck with the florid red color of the blood, and the distance to which it was propelled; also, the difficulty experienced in suppressing the hæmorrhage; this was at length accomplished by means of a compress and bandage very tightly applied. On the following day the arm felt stiff, and he had the bandage loosed, but continued to wear it for several days. On its removal he observed the 'beating tumor' in the arm, became alarmed, and applied to the hospital for relief. On inspection, a firm pulsatory tumor, about the size and shape of a pigeon's egg, was detected in the bend of the arm, along the course of the brachial artery, with which vessel it appeared intimately connected. It became smaller when compressed, but resumed its original size when the pressure was removed. The radial pulse on that side did not beat so fully as on the sound side. The integuments were perfectly healthy, and presented a small cicatrix, such as might be expected after venesection. The only vein which could be detected in the neighborhood of the tumor, was the median basalic; it ran in front nearly an inch internal to the cicatrix, and obviously had not been opened in the operation. * * * The patient was immediately confined to bed, the limb placed upon a pillow, some cathartic mixture prescribed, and sixteen ounces of blood abstracted from the opposite arm.

"The next day a thin compress of wetted lint was laid upon the aneurism, and a roller bandage applied from the fingers to the bend of the arm, in the manner recommended by Genga, care being taken that the compression should not extend above the aneurism. The turns of the bandage over the aneurism were very loosely applied. The patient was desired to keep the compress constantly moistened with cold water, and to take a draught containing two drops of tincture of digitalis every sixth hour.

"Two days subsequently the bandage was opened and reapplied, the draught was continued, and he had sixteen ounces of blood taken from the opposite limb.

"On the 7th day the aneurism felt more solid, and did not diminish so sensibly when compressed. The bandage was reap-

plied, and a compress of sponge substituted for the lint; the digitalis continued, and other treatment as before.

"* * * On the 30th day there was no trace of the aneurism; the brachial artery could be felt pulsating strongly beneath the cicatrix in the integument, and the radial pulse appeared as full as that of the opposite limb.

"On examining the patient eighteen months subsequent to his dismissal from the hospital, no trace of the aneurism could be detected; the artery pulsated beneath the cicatrix strongly, the pulse at the wrist felt perfectly natural, and he stated that he had not suffered the slightest inconvenience from the arm, in pursuing his very laborious occupation." — *Dublin Journal of Medical and Chemical Science.*

Milk Powders.

"About six years ago a lady came to Dublin to be confined at her mother's house, when I happened to be in attendance on another member of the family. A few days after the accouchement I was informed that she was in great distress on account of having so scanty supply of milk, that it was declared impossible for her to go on with the nursing. Under these circumstances, and as her medical attendant had given up the matter as hopeless, her mother applied to me for something likely to produce the desired effect. Upon inquiry I found that her daughter, who was a strong healthy young woman, was peculiarly anxious to be able to nurse this her first child, and could scarcely rest, so frequently did she give the child the breast, in order to try whether, to use a vulgar expression, the milk was coming. I immediately suspected that her over-anxiety about the matter, and the manner in which her whole attention was constantly turned to the secreting organ, had a sinister influence upon its functions, and thus prevented the secretion of milk. My object, therefore, was to divert for a time the current of her thoughts from that subject, in order to give the mammary glands an opportunity of performing their office undisturbed by her state of mind. To accomplish this it was necessary to defer her hopes of having a supply of milk to some future day; and I therefore gave her powders, consisting of calcined magnesia and aromatic powder, which I assured her would have the effect of bringing abundance of milk to her breasts at the expiration of two days. I directed that one of the powders should be taken every third hour, both night and day, and that the infant should not be put to the breast until the two days had elapsed. I laid great stress upon their being taken precisely at the hours specified, and told her not to uncover or examine the breasts until my next visit. The powders were marked 'Ger-

man milk powders,' and their whitish color, I hoped, would favor her confidence intheir efficacy. My expectations were realized. Before twenty hours the flow of milk was abundant; and in two days afterwards I had a visit from her accoucheur, who came to beg, as a special favor, my recipe for the German milk powders!" — *Dr Graves.*

Constipation.

Under the head *Habitual Constipation*, Dr Graves recommends the following electuary, the object of which is the removal of costiveness, without the inconveniences which attend the use of ordinary remedies: — "R Electuarii Sennæ ʒ ij; Pulv. Supertart. Potassæ ʒ ss; Carbonatis Ferri ʒ ij; Syrupi Zingiberis q. s.; Ft. Electuarium.

"For the first two days I generally add about two drachms of sulphur to this electuary; but as soon as its operation has been established, the quantity of sulphur may be diminished one-half, and at the end of a week it may be omitted altogether. The dose must be regulated by its effects, but in general a small tea-spoonful in the middle of the day, and at bedtime, will be sufficient.

"The value of the carbonate of iron as a tonic aperient has not been duly appreciated; I have succeeded in curing, with it alone, a practitioner of eminence in this city, who had been long subject to extreme constipation, and had been reduced to the necessity of taking an enormous dose of purgatives almost every week. * * *

"When the tendency to constipation is habitual, and the patient is not effectually relieved by the daily use of injections, and when the peculiar circumstances of the complaint render the administration of aperient medicines by the mouth inadmissible, great advantage may be derived from the application of purgative liniments to the abdomen. The one I have found most useful consists of four parts of castor oil and one part of tincture of jalap. This must be diligently rubbed into the region of the stomach every morning before the patient rises, and it must be done under the bed-clothes, lest the unpleasant odor should sicken the stomach. I am indebted to a medical friend for this suggestion, which I used with success in the case of a young gentleman, whose state had become almost hopeless.

Internal Administration of Cold Water, exclusively, in the Third, or Collapse Stage, of Malignant Cholera.

By Hardwick Shute, M. D., Gloucester.

Being an Abstract of two Memorials addressed to the Central Board of Health, London, August 21st and 25th, 1832.

Gentlemen, — It is stated in your circular, dated 9th August, 1832, that in the third stage of cholera there is but little reason for hope. I request your particular attention to a plan of treatment which I have found succeed in twelve consecutive cases in which my directions were strictly adhered to.

My attention was very early directed to the fact, that most decided injury was done by the administration of brandy or alcohol in any form, or even of stimulant emetics, where they were retained, as frequently happened in the advanced stage of collapse. I was most forcibly struck with the marked analogy which exists between the collapse of cholera and the impaired vital energy which results from starvation or excessive cold. Now it is an established fact in therapeutics, that the administration of a stimulus, disproportioned in strength or extent to the impaired vital energy of the system, is certain death. The treatment which I have adopted in the second and third stages of cholera, is founded on the analogy already mentioned, and on the general principle, that the greater the sinking of the vital powers, the greater is the necessity of withdrawing all kind of stimulus. The circumstance which particularly directed my attention to the remedy I employ was the thirst, the inordinate desire for cold water almost exclusively. I shall therefore state, that the allowance of cold water which, in the most marked cases of recovery, was taken to the extent of some gallons in a few hours, is the circumstance to which I desire to call your attention. I add to this the abstraction of all kinds of stimulus, external and internal, even to the exclusion of friction, or the application of heat in any form. The number of cases, I think, is not too few to justify a more extensive trial of the plan proposed. My observations apply to the second, and particularly to the third stage of cholera, "when the pulse at the wrist has ceased, or become almost imperceptible."

The windows of the apartments, at the Cholera Hospital in Gloucester, are large and numerous in proportion to the size of the room, and the door which opens immediately into the garden, seldom shut. The windows are open day and night, so that the patient may be considered as living in the open air, and the fire is kept so low as not to influence the temperature of the room. The covering of the patient is confined to a light blanket or rug; and it seldom happens that some part of the patient, particularly the breast and shoulders, is not constantly exposed. Under these circumstances, a pint of cold water is offered to the patient, and

very frequently two-thirds of this are taken at a draught. In what I consider the most favorable cases, vomiting is almost immediately produced, and the patient in two or three minutes again calls for, and eagerly drinks, the same quantity, with the same results. This is often continued for hours, until gallons of water have been taken, and the greatest proportion, but I conceive not all, is rejected. In other cases the patient is too insensible to ask for water ; and under these circumstances, it is offered every ten minutes or quarter of an hour, and most commonly drunk with avidity. If gruel or tea be offered, the patient most frequently refuses it ; and, generally speaking, no kind of nutriment is taken in any form until the period of convalescence. In the first six or eight hours no amendment can be observed. In the next six or eight hours there is some diminution of intensity in the purple hue of the extremities. In the next six or eight hours there is a manifest improvement in the countenance of the patient and increased disposition to sleep. In some cases the pulse has not been perceptible for twentyfour or thirtysix hours. From this period, the pulse, the animal heat, and the secretions, are very gradually restored ; and at the end of fortyeight hours, on the third day from the commencement of the plan of treatment proposed, the patient is convalescent ; and in all cases without consecutive fever. I mention these circumstances particularly, in order that the practitioner may not be impatient : he should not make the least alteration in the plan laid down, as long as the patient is merely not getting worse.

I cannot now refrain from briefly suggesting, 1st, the importance of knowing, that in the collapsed stage of cholera, cold may be extensively applied to the coats of the stomach without diminution (to use the most cautious term) of the vital energy ; 2d, that cold so applied has a manifest tendency to check the exudation of serum, which characterizes the disease ; 3d, the acknowledged good effects of vomiting ; 4th, the probable good effect of the fluid absorbed from the stomach in restoring the fluidity of the blood ; 5th, the great importance of the arterial circulation being restored as gradually as possible, and the fact of convalescence taking place without the consecutive fever.

August 21st.

The first case in which the water practice was tried, and proved successful, occurred about six weeks ago, soon after the appearance of the disease in this city. In the four first cases which came under my notice, internal and external stimulants were liberally administered. The mustard emetic and bleeding were also had recourse to, and every patient died. In these four cases I had observed that thirst was a prominent symptom ; and in one instance, when the patient was unconscious of everything, I was much struck with an earnestly expressed desire that no fire should

be made in the room; directions to that effect having been given in her hearing.

Soon after this, I was requested by a medical gentleman of this city to visit one of his patients, a female, aged 15. It was a marked case of collapse. (Many remedial means were tried in vain.) I left the house with the impression that our patient would not survive many hours. Having reflected upon the case, and feeling anxious, if possible, to give some relief, I returned in the course of an hour, and ordered some very strong green tea to be made, with the intention of giving it to an unlimited extent. Whilst the tea was in preparation I presented about a pint of cold water to relieve the thirst, which was urgent. There was at that time no improvement in the symptoms. The greater portion of the water was drunk with avidity, and almost immediately rejected. A few minutes after, the water was asked for, and drunk with the same result. Having witnessed a continued repetition of this process for half an hour, without any symptoms of increased collapse, and with a satisfactory circumstance of a change in the voice, which had been strongly characteristic of the disease, I left the patient, with directions that cold water should be given to any extent which she might desire. The tea was refused as soon as tasted. I was informed the next morning that she had taken the water to the extent, as it was imagined, of some gallons, and had been sick after each draught; but had not asked for the water, or been sick, for the last hour. The window which opened immediately upon the bed, was unclosed and had been so, I was informed, the whole of the night. At this time there was no perceptible pulse, or increase of animal temperature, but the countenance was, I thought, somewhat improved. The same plan was continued. In the evening the pulse was perceptible. The next morning reaction was established, and in two days from that period the patient was convalescent without fever.

Soon after this, I met another medical gentleman, who was quite in despair; he said he had lost *seven* cases of cholera in succession, and had another who would probably die before night; and that he had done nothing, merely ordering small doses of capsicum with camphor mixture. I found this patient (a female, æt. 21) in a very similar state to the last, and recommended the unrestrained use of cold water. The next day she was better, and on the following day I found her restored, but with too much excitement; beer and cider, as well as cold water, having been, through the prejudice of the attendant, very freely administered. She was perfectly restored in a few days.

This practice has been adopted by other medical gentlemen, in one instance to my knowledge; and I have reason to think in another; but in some modified form; in both instances originating in my suggestion. The gentleman with whom I attended the second case already mentioned, has favored me with the following letter :—

"*My dear Sir*, — It is with much pleasure I here enumerate the cases of cholera which have come under my notice since you suggested the cold-water treatment; upon the success of which I beg to offer you my most sincere congratulations, and doubt not but the same beneficial effects which I have witnessed will be generally experienced when the practice has become more frequently adopted. I remain, your sincere and obliged friend,

"CHARLES CLUTTERBUCK.

"*Gloucester, Aug.* 25, 1832."

A. B. (the names are given in Mr Clutterbuck's letter), a female, age 20, (the young woman you saw with me), having drunk freely of cold water, recovered in a few days; able to go to her usual employment.

B. C., male, boot-maker, aged 21, a very hard drinker; took one dose of an aromatic mixture; drank freely of cold water, and could not be prevailed upon to taste his mixture afterwards; perfectly recovered in a few days, to the great astonishment of his friends.

C. D., male, aged 5 years. A very severe case. This child drank, during the night, nearly *three gallons* of cold water, and was convalescent, but is now suffering from a severe attack of fever.

D. E., female, age 34. The same plan of treatment, and was convalescent in a few days.

E. F., male, age 32. Treated upon the same plan, and convalescent in a few days.

My experience, subsequent to the cases mentioned, has been almost confined to the Cholera hospital here, which was opened a fortnight since, under my superintendence, with the assistance of a resident apothecary. The four patients sent to the hospital on the first day, not then under my care, were all corpses the next morning. Since that period, of 48 cases, there have been 20 discharged cured; eight I consider convalescent; eleven deaths, and nine under treatment. Of the deaths, two were obviously referable to previous treatment; three were in progress towards recovery, and relapsed from over exertion while in a state of extreme debility; two were under the age of three years, and died from cerebral congestion; one was more than fifty years of age; one sixty (the former extremely emaciated, from vomiting or disease;) one was so far advanced as almost to have lost the power of swallowing; and one, a notorious drunkard, died with a gin bottle concealed about her person, a few hours after admission into the hospital. The deaths cannot, I think, throw any discredit on the practice. Any suggestion from those who are much more conversant with the disease than myself, will be received with gratitude, or any question answered to the utmost of my ability. I am, Gentlemen, your obedient humble servant,

Gloucester, Aug. 25, 1832. HARDWICKE SHUTE, M.D.

On Ligature of the common Carotid Artery in Epilepsy.

By J. R. Preston, Esq., Surgeon.

Michael Cox, penisoner, ætat. 25, sanguineous temperament, and muscular. This man has for the last five years been subject to very severe epileptic fits, recurring generally about once a fortnight. He had lived, generally, temperately. Since the first seizure, the epileptic fits have generally recurred without any assignable exciting cause, but have been also occasionally induced by intemperance. He had been frequently bled during the paroxysms, but had not, by his own account, been subjected to any other mode of treatment. There was, in this case, great cerebral congestion — a feature which I conceived essential to every attack of epilepsy, and by preventing which, (an object I believed attainable by tying one or both carotid arteries) I hoped to cure the disease.

The operation was performed on the 4th of February. It took up considerable time, owing to the quantity of blood that flowed upon the slightest incision, obscuring the parts, as well from the livid color the patient's face assumed, and the feeling of extreme giddiness, induced by the recumbent position in which he remained during the operation, which obliged me to raise him repeatedly, as I feared from these symptoms, the recurrence of another attack. I found it necessary, at last, to bleed him largely from the arm, after which no farther cause of delay occurred. He had been bled freely the preceding day, also, in consequence of one of these fits. I divided the sheath as near the larynx as possible, that there might be less chance of wounding the external jugular vein. A small vein that crossed the artery was divided, and there was a considerable flow of blood, which alarmed me greatly for the moment; it soon, however, subsided.

The artery was very little disturbed from its lateral connexions, and was secured with a single ligature; the edges of the wound were brought together, and kept in contact with three sutures, over which strips of adhesive plaster and simple dressing were applied; above these a pad of folded cotton was placed, to keep the skin as much as possible in contact with the parts beneath; and finally a roller.

The patient had taken a dose of salts the day before, which had operated moderately.

On the 4th, 5th, and 6th, there were no constitutional symptoms whatever; there was slight uneasiness in swallowing his spittle, or anything of very small bulk, as it required a greater degree of contraction in the muscles concerned in deglutition.

On the 7th he complained of pain over the left temple; tongue white and dry; skin warm; pulse 72; bowels open freely; the wound was dressed for the second time, and was nearly healed, but there was some swelling and hardness about the cervical glands. He had been drinking the previous night.

Seven leeches were applied to the temples and he took six drachms of sulphate of magnesia, as a precautionary measure. He was discharged from Hospital on the 24th, the wound having been for some time completely healed, except at the single point where the ligature hung out. He attended daily to have it dressed.

The ligature came away on the 5th of March.

April 13. Since the operation was performed, there has been no return of the epileptic attacks, nor any tendency to them. He has experienced also, since that time, a great improvement in his general health and feelings. He has also proved the efficacy of the remedy that has been employed, by very hard drinking, which he and his friends considered a test; it required a large quantity of spirits to make him drunk, and he did not afterwards experience the headache, and gloomy and even horrible feelings, which had previously always followed such an excess. He is now as happy as he was before miserable and wretched.

The following opinions by Dr Clutterbuck, upon the nature of epilepsy, are so much in support of this operation, that I have taken the liberty of quoting them; he considers cases similar to the present, the most unfavorable, and under the ordinary modes of treatment the least likely to be cured.

"Epilepsy (he observes) often makes its attack without any obvious cause, and quite unexpectedly; such are generally the most unfavorable cases in regard to prognosis, as they show a stronger disposition to the disease, so that it is brought on by causes too slight for observation." * * * — LANCET, vol. 12, p. 355.

"Now you are always to consider epilepsy as a brain affection, and upon this simple ground, that it is merely a disturbance of the function performed by the brain, and by this organ alone." —*Ibid.*

I cannot help expressing a hope that tetanus might be cured by tying both common carotid arteries. In hopeless cases we should, I think, be fully justified in trying such a mode of treatment. I must quote Dr Clutterbuck again upon this subject.

"Tetanus is necessarily to be considered as a disease of the brain, or cranial portion of the nervous system, though it is possible that it may extend to the spinal chord at the same time. * * * Upon the whole you must consider the proximate cause of tetanus to be at least doubtful, but you need not hesitate in referring the disease to the brain as its primary seat." — LANCET.

I beg leave to suggest, as a subject for speculation, what would be the effect of tying the carotid arteries in cases of hydrophobia. The symptoms seem all clearly referable to the brain and nervous system, and have much, if not entirely, the character of undue excitement. — *Lancet.*

POSTSCRIPT.

At a special meeting of the Boston Medical Association, held at the Massachusetts Medical College, November 14th, 1832, the following resolutions were unanimously adopted.

The Boston Medical Association having received with great satisfaction the visit of the late Dr G. F. Spurzheim, and their acquaintance with him, having inspired them with high respect for his researches in Anatomy and Physiology; and a deep interest in his opinions on the moral and physical improvement of man;

Therefore, Resolved, That we view the decease of Dr Spurzheim, and the termination of his labors, as a calamity to mankind, and in an especial manner to this country.

Resolved, That a respectful letter be addressed to his friends in Europe, by the Secretary of this Association, detailing an account of his labors, his illness and death, and the expressions of public respect paid to his memory.

Resolved, That this Association, as a body, will attend the funeral obsequies of the deceased.

Resolved, That we recommend to our fellow-citizens, the opinions of the deceased on the improvement of our systems of education, and especially in relation to the development of the physical powers and moral dispositions; and as they can no more expect to hear them from the lips of our lamented friend, that they lose no time in making a practical application of them, to the existing state of our institutions for the culture of the human mind.

Attest,

JOSEPH W. McKEAN, *Secretary.*

MEDICAL MAGAZINE.

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" Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I. — POPULAR ERRORS RELATIVE TO MEDICINE.

Popular Errors, relative to Medicine, by A. RICHERAND, Paris, 1812. Second Edition.

STERNE has somewhere an observation to this effect; that every time a man smiles, and *à fortiori* when he laughs, he adds something to the pittance of enjoyment meted out to him to sweeten the cup of his sublunary existence. We would somewhat amplify this doctrine by extending the good effects of pleasant and risible emotions to the physical constitution of man. We would say that a man who smiles improves his bodily health. A regular course of laughing, with reasonable intervals of repose, has cured many a disease, where pill and potion, blistering and bloodletting, drugs and the doctors have exerted themselves in vain. Merry men always live the longest, other things being equal. A man always *feels better* after a laugh. This faculty is, indeed, more truly and emphatically, the distinguishing characteristic, the peculiar and exclusive attribute of the human race than that of speech. The parrot and the magpie may be taught to talk, but nobody ever saw them smile. Even reason, the crowning glory of human nature, does not so entirely set man apart from the brute creation, as does this delightful faculty. Philosophers have called the elephant a half-reasoning animal, but a laughing one was certainly never heard of. For these and many other similar reasons, which it is useless here to enumerate, we hold in much love and estimation the man who furnishes us with the means of indulging

in this pleasurable exercise. Most especially do we esteem him when he comes into our own Æsculapian temple and lays his light, glad offering on the god's over-laden and groaning altar. The gratification is as rare as it is agreeable. There is, to be sure, enough in medicine and in medical writers fit only to be laughed at, if we are disposed so to treat their follies and absurdities. But this is not the *species* of cachinnation which best pleases us. Here is a book the title of which stands at the head of this article, and whose perusal has suggested the foregoing observations, which comes much nearer to the supply of our wants and wishes.

Mr Richerand has long been one of the most *popular* writers in the ranks of our profession. His style is graceful and lucid, and he is always intelligible at the first reading. He has sometimes been accused of being superficial; he may be better charged with occasional carelessness, and he evidently writes, "currente calamo." If the man may be judged from the pervading spirit and manner of the work before us, we should say, too, that there is running through his character a pure vein of genuine humor, exceedingly sly, quiet and pleasant. M. Richerand is mostly known in this country as a writer on physiology, and his "Elements of Physiology" is a work which stands confessedly at the head of comprehensive, elementary treatises on this branch of medical science. The edition of his book on the popular errors relative to medicine which we here speak of, was published as long ago as 1812, and has never, that we know of, been translated into English, and is but little known, we presume, to most of our readers. The object of the present paper is to supply this deficiency, and we hope that our readers will be both amused and instructed by the brief and rambling abstract of the book which it is our design to make.

The Chevalier Richerand says in his introduction that he shall speak not only of such errors as are familiar to the *people*, but of those which are every day committed by the *vulgar* among *physicians*, and indeed a goodly portion of the work is devoted to the castigation of these latter gentry. We shall not follow him in his strictures on the errors and absurdities to be found amongst medical men: — three quarters of the entire history of the science is made up of these abounding materials. By the *people*, M. Richerand means not only the great mass of mankind obliged to devote their whole time to the bare supply of their commonest physical wants, but men of brilliant and cultivated minds; and in speaking of the difficulty which the physician often encounters in managing this class of patients,

he says with as much truth as epigrammatic prettiness, that *when you ask them how they feel, they will tell you what they think.* We venture to say that every practitioner, however small may have been his modicum of what is generally called *experience*, has more than once *experienced* the pleasure of interrogating one of this kind of patients. We do not here speak of hypochondriacs whose chief disease not unfrequently consists in the superabundant knowledge which they imagine themselves to possess of its nature and situation, but of such as never suffered from the blues, and who pass among their fellows for persons of good sense and sound judgment. These men, wise in their own conceits, will edify you to satiety with their own pathological theories and explanations, but you might as well attempt to convince M. Broussais of the reality of such a disease as general, idiopathic fever, as to expect from them anything like a plain, simple statement of their own bodily sensations. It would be easy to accumulate illustrations, *ad infinitum*, of the truth of these remarks, but the recollections of every practitioner will furnish him with an abundant supply of them.

In the first chapter M. Richerand speaks of the false opinions concerning the human fœtus, of monsters, hermaphrodites, maternal marks, metamorphoses of sex, &c. "People of the world," says he, "most distinguished for their intelligence, have full faith in the birth of infants resembling more or less, the lower orders of animals. How many times have they endeavored to conquer my incredulity, in assuring me, on the irrefragable testimony of persons worthy of implicit belief, that a young girl was born with her body surmounted with the head of a hog, grunting most frightfully, and that this nondescript had been secretly strangled by the astounded family: at other times it was an infant perfectly well formed with the feet of a dog. Open the scientific collections, published during the sixteenth century, *the Ephemerides of Natural Curiosities*, for example, and you will there read that a woman was delivered of a serpent, another of a lizard, and a third of a fish. There was a time, says the ingenious Fontenelle, when all philosophy consisted in seeing in the operations of nature nothing but prodigies." We have ourselves heard similar stories of these half human monsters and we know some M. D.'s who believed them. M. Richerand tells some amusing tales on the subject of maternal marks, or as the French call them, *envies*. The belief in the reality of the influence of the mother's imagination on the fœtus seems to be universal. The celebrated Mallebranche in his *Search after Truth*, is so well satisfied of the

existence of this influence, that he advises women who have a *longing* for any particular article during pregnancy, to scratch the posterior part of the body in order that the infant may have the mark on those parts which are usually covered. The efficacy of this manœuvre is received with full faith among the sage old women of our own country. If the existence of the maternal influence, manifested in imprinting certain marks on the skin of the fœtus, is made a matter of mere physiological reasoning, it becomes, to say the least, one of Sir Roger de Coverly's questions, in which much not only has been, but may justly be said on both sides. If we are not mistaken, there are men — one or more — of distinguished professional skill and attainment among us who are advocates of this doctrine.

In the second chapter our author exposes some of the common errors relating to the physical education of children, but as he says nothing new on these subjects, we pass it over, with the single remark, that the barbarous custom of *swathing* is still practised in some of the enlightened portions of Europe. In the year 1827, we saw a large number of infants so tightly wrapped with swathing bandages that they could not move a single limb; the circulation of the blood was very much impeded, and except from the danger to the head and neck they might have been tossed about like so many billets of wood, and this too, at a large medical institution in Italy within two days' ride of the residence of Scarpa!

The third chapter commences with a definition of health, and as it is devoted to a notice of the errors concerning its preservation, the following matters, among others are discussed. Precautionary bloodletting and purging; whether man is omnivorous; whether pure brandy is more favorable to health than lighter and sweeter liquors; whether sugar is heating; whether oysters are soluble in milk; whether exercise should be taken before eating or after; whether artificial mineral waters are as good as the natural ones which they are intended to imitate; whether the future is revealed to us in dreams; whether there is danger in sleeping too long, &c. The chapter concludes with some observations on books of popular medicine, and as there is a difference of opinion among physicians as to the utility and propriety of such works we shall copy M. Richerand's words on this point. "I cannot finish this chapter," he says, "without condemning with my whole energy books of popular medicine, these *directions to the people* about their health, works got up by mediocrity and intended for ignorance. Never has a true master of his art, never has a phy-

sician really illustrious, abased himself by this specimen of composition. The *Directions to the People* of Tissot, and the *Domestic Medicine* of Buchan have destroyed more lives than the most murderous war. The reading of such books by people of the world cannot be too rigidly interdicted. They imbibe false ideas, or at least such as are incomplete and of course as dangerous as the first, in a science the application of which requires distinctions so nice and delicate as does that of medicine. Ignorant of the foundations on which its principles rest, they make no allowance for the innumerable modifications required by a difference of age, sex, temperament, season of the year, climate, and other varying influences so numerous as to make in medicine the cases of exception to any general rule almost as numerous as those to which the rule is strictly applicable. They infuse into the minds of country pastors and other well meaning, but over zealous and ignorant persons, the most presumptuous and culpable confidence in their own knowledge and skill. It may seem strange that I should manifest so vehement an indignation, but to whatever extent this indignation may be carried against these books, it can never equal the ills which have been caused by them."

Various errors in relation to diseases are enumerated and either argued against, or ridiculed in the course of the fifth or sixth chapters. It seems from these chapters, that natural bone-setters are no less common in France, than among ourselves. During my early days, says M. R., I witnessed a spectacle, the recollection of which will never be lost. Some of these fellows, after various unsuccessful attempts to reduce a luxated shoulder, resorted to the following operation. The patient, an unusually large and athletic man, was firmly held upon an immovable bench under the weight of several assistants. A strong bandage was tied round the arm above the wrist, to this was fastened a cord which was attached to the roller of a *wine press !* Twelve men were employed to turn the screw, and they had no sooner commenced, than amidst the most horrible groans and cries of the sufferer, the skin of the axilla was lacerated in several places, and the arm would have been torn from the trunk, had the men who were employed to hold the patient persisted in the performance of their office. They released the man who thus luckily got off with only a permanent and incurable injury of his arm. These men, thus possessing what in English would be called a *natural gift*, are especially successful in setting bones which are not out and in elevating depressed ribs. Some of the good women of France are cel-

ebrated for their dexterity in *putting up* the stomach which they say frequently falls down or gets out of place. This is done by *kneading* the stomach with the *knees*,* whenever the individual feels any pain in the epigastrium. They also excel in pushing down the uterus when it rises up into the throat. We believe there is an operation, bearing in its nature, some analogy to this, which is not unfrequently done by the female doctors in many parts of New England. The disease requiring it is called in common parlance the falling down of the palate, and the operation consists, of course, in its elevation. Some amusing anecdotes are told in relation to fashionable diseases and remedies. La Vasseur says in his history of Louis XIII. that this monarch being attacked with the vapors, all his courtiers imagined themselves, or pretended to be afflicted in the same way. When Louis XIV. was suffering with a fistula in ano, the gentlemen of his court contracted the same disease, and some among them applied to the surgeon to operate for the cure of their imaginary malady.

The seventh chapter is occupied with the consideration of various opinions which are of a professional rather than a popular character. We pass them over as containing little or nothing worth repeating here.

In the following chapter are discussed several popular, physiological proverbs, the first of which is the saying which makes *heart* synonymous with *courage*. M. Richerand here enters into some explanation of that metaphysico physiological principle which makes our passions and wants dependent on the condition of the viscera. That these latter do always influence those wants and impulses more especially appertaining to our animal nature — nay, that they not unfrequently rule them with a despotic energy, which the intellect and will are utterly unable to control, is undeniable. The doctrine of *temperaments* — a doctrine which, in some form or other, and always essentially the same, has prevailed ever since the existence of medicine as a science, depends upon this general law. Indeed, it is probably true that the mere matter of size — of physical

* This pun will do for a *pendant* to one perpetrated by the Chevalier Richerand himself, though he goes further than we shall, in apologizing to his readers for the commission of the deed. The French term for gout is *goutte*, and the same word means *drop*. M. R. in speaking of a charlatan who had invented a nostrum and who was seeking for some disease, to the cure of which it might be applied with the most probable success, which disease he wished to be somewhat obscure in its character, says that he finally fixed upon the *goutte*, a malady in regard to which it may be said not a *goutte* can be seen.

volume, apart from cerebral development or intellectual culture, modifies more or less the character of the individual. The dramatist understands this when he gives to his busy, bustling, inquisitive, restless and ever active character a diminutive stature. M. Richerand says, in a work of his not now under review, that little men, all other things being equal, have not so fair a chance for long life as big men — that, as these latter live *slower*, they may also live *longer*. We ourselves belong to the Lilliputian class, and as our physiologist has awarded the palm of longevity to our colossal brethren, he gives us, as a kind of offset for the probability of dying soonest, the credit of superior *intellectual* activity as well as bodily, — so that, according to his doctrine, the *great* men of the world have generally been *small* men.

C'est un mâchoire, literally, he is a jawbone, is a common saying among the French, to designate a stupid fellow. The truth of this adage is founded on the fact that men, the anterior superior portion of whose heads is imperfectly developed, thus rendering the jaw comparatively prominent, are commonly characterized by intellectual weakness and imbecility. We have here a popular illustration of the general law deduced from the *facial angle* of Campen. This subject stands in near relationship to that other ingenious system of modern origin called phrenology, and M. Richerand takes the occasion to state briefly his objections to its principles, as they are developed by Dr Gall. We feel no disposition to recapitulate them now, and it may not be irrelevant to observe that late occurrences have surrounded this doctrine with an interest and introduced it into this community with a degree of favor, which no other circumstances could have imparted to it. The worthy coadjutor and associate of its founder has just finished, in our own neighborhood, his earthly career. The High Priest of the Science has laid his last offering on that shrine which his own hands had helped to elevate and adorn, and the altar itself has become consecrated by our recollection of the warm and benevolent heart, glowing with good will to man, and the simple but persuasive eloquence of its excellent and amiable worshipper.

The ninth chapter is taken up with notices of several hygienic proverbs. *He who is a friend to wine is an enemy to himself; Meat well masticated is half digested; There is no condiment like an appetite.* These are not popular *errors*, certainly, and we enumerate them to show the miscellaneous character of the work.

The error of regarding medicine and surgery as two distinct sciences, is treated of at some length, and in speaking of the state of medicine in France, M. Richerand says, "I cannot pass in silence an abuse very prevalent at the present day which, beside throwing ridicule upon the profession, is unfriendly to the true interests and progress of the science. There is no physician, now-a-days, who is not able to prefix to his name some academic title. The capital and the provinces swarm with medical societies, which illustrate with various titles the names of their members. The following anecdote may not be out of place here. "Four young physicians, not wanting in intellect or acquisition, constituted themselves an academic society with an imposing name, conferred upon each other mutually authenticated diplomas, and then adjourned, *sine die*." What would our scrupulous critic say of a collegiate institution, conferring, under the sanction of a state charter, an honorary degree of M. D. upon a gentleman, who, according to his own account, once had a *female* patient suffering with disease of the *prostate gland ?* This has been done.

We close the article with a few extracts.

"For every physician, worthy of the name, there is one sure basis of a reputation which can never be shaken ; I speak of the judgment of his peers, the consideration and esteem of his associates. Although jealousy and envy may too often warp these judgments, they are generally as just as they are enlightened. I might here appreciate the emptiness of those reputations which, suddenly produced by some happy hazard, are as suddenly destroyed by some untoward occurrence. Shall I hand over to ridicule those physicians, who, as ignorant themselves, as they are unknown of others, excel in repeating in one house what they have learnt in another ? They remind us that to a physician of Venice we are indebted for the establishment of the first newspaper."

"Is the most learned physician always the most skilful and the most worthy of confidence ? There is, I think, one quality more desirable and more useful than the most profound erudition ; — I speak of *tact*, that precious endowment, accorded or withheld by nature, which is in medicine what taste is in literature. It depends upon sensibility happily developed and perfected by education. He who possesses it, surprises us by his perceptions, as quick as they are sure and delicate, and his judgments, as prompt and ready as they are correct. To him belong in the moment of danger, those happy inspirations, or, to use the sublime expression of Bossuet, those sudden *illumi-*

nations which reveal to him what it is necessary to do, and give him the confidence that enables him to strike a decisive blow. While the *savant*, cumbered with the weight of superfluous science, hesitates and wavers between a thousand means which occur to him, the other, *less* learned but *better* learned, as Montaigne says, seizes the prominent and essential circumstances, and, not suffering his attention to be distracted by simply accessory phenomena, sees clearly the end to be attained and arrives at it with certainty."

"One principal reason of the great favor with which men listen to sarcasms and satires directed against medicine may be found in their self-love, that Proteus, which, under a thousand different forms, we are continually meeting. Men take pleasure in thus avenging themselves for the domination to which they are subjected. Safe and sound, they belabor manfully the idol to which, as soon as sick, they bring their humblest petitions. The art is, indeed, somewhat tyrannical. Neither youth, nor beauty, nor rank, nor fortune, nor intellect can escape from its empire, and the potentate as well as his slave is continually subject to its dominion. Louis XV., reading a prescription of his physicians, repeated in a low tone and with a dissatisfied air, the customary directions — *Do this, take this, abstain from that, &c.* His ministers and generals were not in the habit of employing these imperative terms."

Art. II. — Combe on the Constitution of Man.

The Constitution of Man, considered in relation to External Objects, by George Combe, Esq., 12mo. pp. 310. Boston: Carter & Hendee.

This, though a small volume, contains matter of great value, in a form peculiarly attractive and useful. The views it exhibits of human nature and its external relations, although philosophical and profound, are so simple and perspicuous, and accompanied by illustrations so apt and familiar, that no one can mistake them. They are moreover of the utmost practical importance, being of universal application, and purporting to be rules established by nature for the government of life. Nor do they only "purport" to be such rules; from an attentive ex-

amination of them, we believe they are so, because they grow out of the constitution of man, and that of nature as far as it bears on him, and the relation which the two sustain to each other. They are therefore conformable to that relation.

We have said that the views presented in this volume, are so simple and lucid, that they cannot be mistaken. They will be most readily understood, however, and most justly appreciated by those who possess some knowledge of the principles of the science, to which they belong; and that science is Phrenology.

We entreat the reader not to feel scandalized at this information; nor, with a curl on his lip, and other tokens of dissatisfaction and scorn, close the book, or toss it from him, and resolve to form no further acquaintance with this article. Such proceeding, besides being somewhat uncivil toward a stranger, who means no offence, is not the most certain way to gain knowledge. A thing is not, in its nature, useless, silly, or pernicious, nor ought it to be deemed so and neglected, merely because it is new and not understood; or because it is laughed at and denounced, by those who have never examined it. Were the contrary of this true, knowledge would first stop, and then retrograde; for all things must be in motion; and, in such a case, to move forward would be impossible. Every discovery, invention, and improvement, whether in science or the arts, is at first new, and understood only by those with whom it originates. But nothing short of folly, or something worse, will condemn and reject them, on this account. Yet, for a time, after their origin, most of them have been condemned. The art of printing was once new, and was ascribed, by the vulgar, if not by the whole world, to the devices of the devil. The mariner's compass, the quadrant, the telescope, the lightning-rod, and the steam engine were also originally new, and experienced their full share of opposition and abuse. Of vaccination and variolous inoculation the same is true. The latter process was pronounced an imitation of Satan, who was alleged to have been the author of it, when he inoculated Job. Yet these discoveries and inventions became afterwards sources of pride to the countries, in which they were made, and of glory to their authors, and have conferred on mankind incalculable benefits. Indeed the uniform course of things, in relation to these matters, has been, first opposition, with perhaps denunciation and persecution, then toleration, next adoption, and ultimately applause.

Phrenology, then, purporting to be a discovery in science, of

great importance, had no ground to claim an exemption from the common lot. Nor has it experienced any. The tide of ridicule and misrepresentation, invective and denunciation, not to forget downright abuse, which has set against it in "foaming fury," for the third of a century, would have demolished anything less impassive than truth. The force of the waves, however, already much diminished, is still further abating, the breath of the tempest is, at present, but little felt, and the face of the waters will shortly be smooth.

To drop the metaphor, the opposition to phrenology, which existed in Europe, and which sundry causes contributed to foster is rapidly yielding to the influence of truth. This is especially the case in Great Britain and France,* the two most enlightened nations of the Old World. There, the science is beginning to be somewhat extensively studied and understood; and to understand it and assent to it, are acts of the mind universally associated. No one has ever acquired a correct and thorough knowledge of it, without becoming its proselyte; nor has any convert to it ever apostatized. As far as inquiries of some extent have informed us, every enlightened physiologist in Europe (certainly every one of distinction, in Great Britain and France,) believes in the truth of its fundamental principles. So does every physician of note, who keeps pace, in his studies, with the rapid progress of medical science; and so do thousands of distinguished individuals, who do not belong to the profession of medicine. For evidence confirmatory of this, we appeal to many of the most respectable periodicals of Europe, with other works of high standing, which are issuing from the press. We might also, for information, virtually to the same effect, refer to the splendid funeral honors paid, a few years ago, to Dr Gall, the founder of the science, and to the monument subsequently erected to his memory. At a preceding period, he had been fiercely assailed by ignorance and bigotry, on account of his opinions. Some of them who eulogized him, at his grave, had been previously his opponents, and had joined in reprobating the doctrines he

*The Phrenological Society, lately established in Paris, is destined to become one of the most distinguished scientific institutions of the day. It began with about one hundred and twenty members, belonging to the various walks of public and private, literary and professional life, and the number is fast increasing. Among them are many of the ablest naturalists and physiologists, and indeed not a few of the most enlightened men in France. It is not possible for the labors of such a body to be overlooked or unfelt. Many who refuse to listen to reason, or to give their due weight to facts, when presented by individuals, feel the influence of high authority, especially when connected with large numbers.

taught. And, since his death, the principles he inculcated in his lectures and writings, have been much more extensively adopted, than they were during his life. Even the Edinburgh and Quarterly Reviews, the arch-enemies of phrenology, have greatly abated, in the fieriness and confidence of their opposition to it, if they have not abandoned the controversy in despair. If Sir James Macintosh, and a few others, high in literary fame, still persist in rejecting the science, the innumerable mistakes they commit respecting it, in their writings, clearly prove that they have never studied it. Besides, they are far advanced in years. Age, therefore, had settled their habits of thinking, and rendered their minds inflexible, if not impassive to innovations in knowledge, before the system of Gall had been unfolded. Nor is this all. Although the writers, here referred to, are men of letters, they are but slightly versed in that department of the knowledge of nature, to which the science we are considering belongs. In plain terms, they have never seriously thought about it, and are therefore unacquainted with it. Hence, distinguished as they are, in other points of view, their opinions respecting it are of no value.

Such is the present state of phrenology in Europe. We think, therefore, and hope the reader will concur with us, that it is high time the attention of our own country were so far turned to it, that the people might learn to judge of it for themselves. Hitherto this has not been the case. The American public have been deeply abused on the subject, by the unfounded statements, and distorted views, which have been presented to them, by journalists, gazetteers, and other writers, ignorant of the science, and prejudiced against it. In this work of deception, and we must add *proscription*, the Editors of the Edinburgh and Quarterly Reviews, as already intimated, have acted the most conspicuous part. But, instead of opposing the science with reason and calm discussion, those journalists have dealt exclusively in misrepresentation, invective, and abuse. They have poured out the vials of their wrath, on phrenologists and their doctrines, without mercy or measure, in every form of embittered hostility, that an intolerant and persecuting spirit could suggest. And their example has been followed, in the United States, by scores of writers, thousands of readers, and tens of thousands of talkers, in every section of the country; and they have been all actuated by the same motive, a wish to subvert what they did not understand; prejudice and illiberality, arising out of their ignorance of the subject, constituting

the chief ground of their proceeding. Such has been the fanatical crusade against phrenology. But we repeat, that, during all this uproar, no one acquainted with it has ever been its enemy.

As Americans, we are far from being gratified, at seeing our countrymen moulding themselves into copyists of foreign models. Such a measure bespeaks a want of self-respect and manly independence, and ought not, therefore, to be, generally, either practised or encouraged. Exceptions, however, may exist. If we mistake not, one does exist, in the present instance. As the people of the United States have chimed in with the key-note of Europeans, in thoughtlessly denouncing phrenology, we trust they will so far persevere, in their imitative course, as to follow now the more laudable example of foreign leaders, in acquiring a knowledge of it. It is much better for them to do this, than, by continuing ignorant of it, to deprive themselves of the benefits which an acquaintance with it bestows. In the hope that our readers will concur with us, in this opinion, and that we may be the more easily understood by them, in the remarks we shall offer on the work we are examining, we shall submit to them a brief view of some of the fundamental principles of the science.

Phrenology is but another name for mental philosophy. It gives a correct representation of the faculties and their functions which enter, as elements, into the constitution of man, considered, in his true character, as an animal, moral, and intellectual being. It takes cognizance of him, however, only in his compound condition, and in his present state of existence. It affects not to treat of disembodied spirits, which it does not consider as fit subjects of philosophy ; nor, although it acknowledges man's immortal existence, and furnishes matter to sustain a belief in it, does it concern with anything beyond the grave. Its object is, to give correct views of human nature, in its highest capacity on earth.

As respects the nature and operative powers of the human intellect, this science is equally opposed to the doctrines of abstract spirituality, and gross materialism. It assumes neutral, or rather middle ground, and, by uniting the two, avails itself of the agency and advantages of both. Compounded as man now is, it does not admit that either his spiritual or material portion constitutes alone his feeling, perceiving, and thinking agent. It contends that that agent is made up of the union of the two. In plainer terms, it maintains that the mind or spirit feels, per-

ceives, and thinks, through the instrumentality of organized matter, and that it cannot do either without it. According to the tenets of phrenology, then, the matter of the human system is as much of a feeling and intellectual agent, without the spirit, as the spirit is without the matter. Separate them, and they are alike incapable of every form and degree of sensation and intellection. It will be borne in mind, that, as already stated, we speak of man, in his sublunary state of existence, without any reference to what the condition, the powers, or the mode of acting of his spirit may be, after its separation from the body, by death. We shall only add, under this head, that phrenology rejects hypothesis and conjecture, and relies for its support on observation and induction. The boundary of these is that of the science. The following are a few more of its fundamental propositions.

Every portion of the human system is not alike instrumental in the production of sensation and thought. The brain, being the organ of the intellect, is employed exclusively for this purpose,* and is as indispensable to every mental act, as the lungs are to respiration, or the muscles and joints to voluntary motion. This is susceptible of satisfactory proof.

The larger the brain is, and the more perfect its form and organization, the more vigorous and excellent it is, as the instrument of the mind. Its functions are therefore marked with the greater strength. This is as certain, and can be as easily proved, as that, other things being alike, a large musical instrument is louder and more powerful in its tones, than a small one ; or that, in any case, a good machine is superior, in its operation and performance, to an ordinary one.

The brain is not a simple organ, but a congeries or system of smaller organs, each one of which performs a specific function of its own, which cannot be performed by either of the others. As has been already affirmed of the entire brain, the larger each of these subordinate organs is, provided it be in a sound condition, the more vigorously will it act, and the more powerful and striking will be the function it performs.

The entire brain, consisting thus of an aggregation of inferior and separate portions, is divided into three great compartments, the animal, the moral, and the intellectual. The animal compartment forms the base and the posterior portion of the entire organ,

* The nerves are but subordinate and subsidiary to the brain, in sensation, motion, and thought.

and is so called, because it is possessed in common by man and the inferior animals. The moral compartment constitutes the arch or top of the cerebral mass, and most of the subordinate portions of it belong exclusively to the human race. The intellectual compartment is found in the front of the brain, immediately behind the frontal bone of the scull. The subordinate organs, which compose this compartment, are divided into the knowing and reflecting. Most of the former belong to some of the inferior animals, as well as to the human race; but the latter are more peculiarly the property of man. The precise situation of each of the individual organs of each compartment is known.

The size of the entire brain, as well as that of the several inferior organs, which compose it, may be ascertained with sufficient accuracy from the size and figure of the head which contains them. By an external examination and admeasurement of the head, therefore, the amount and character of the intellect can be discovered. However incredible this statement may appear to those who have not attended to the subject of it, it is the positive result of observation and experience. To those acquainted with the science of phrenology, it is as familiar as the alphabet is to the scholar. It may be even received as the alphabet of the science.

We regret that the narrow limits, within which we must confine our remarks, prevent us from offering full proof of the foregoing propositions. They are all equally susceptible of verification, by admitted facts. That they may not be thought, however, to rest exclusively on our bare assertion, we shall state, in part, the arguments in favor of the truth of one or two of them. The others, we repeat, rest on a basis equally solid. The brain is believed to be the organ of the intellect, for the following reasons.

That viscus being well formed and sound, the other parts of the body may be injured, to any extent compatible with life, and the intellect will remain unimpaired.

Concuss, compress, or otherwise injure the brain, all other parts of the body continuing untouched, and a corresponding derangement of the intellect will ensue.

Through all the changes that occur to the human system, in the progress of its growth, maturity and decay, the condition of the intellect corresponds precisely with that of the brain. In infancy and childhood, both are in a high degree, limited and immature, in youth more expanded and vigorous, in manhood

more perfect still, in decline deteriorated and weakened, and reduced to a second state of infancy, in the decrepitude of age.

Is the brain defective in the development of any of its organs? a similar defect exists in the intellect. This is proved in the case of idiots, whose brains are always wanting in size, symmetry or structure.

That a material difference exists between the male and female intellect, is not denied or doubted. Nor will any one, who has accurately examined the subject, refuse to testify, that a like difference prevails between the male and female brain. By a practised eye, a well formed female head can be as easily distinguished from a well formed male one, as the general figure of woman can from that of man. And the difference of intellect, in man and woman, conforms to that of their heads.

No one possessing a diminutive brain, has ever been truly great. Such a phneomenon would be as much out of nature, and therefore as perfect a marvel, as a dwarf endued with the strength of a giant. In proof that human greatness is always associated with a large head, we might cite Franklin, Hamilton, Dexter, Pinckney, Mirabeau, Pericles, Bacon, Sully, Shakspeare, Fox, Napoleon, and thousands of others, both dead and living. The heads of all these personages were of inordinate size. Some of them were large, even to deformity. This is the reason, why, in all the statues and paintings of Pericles, the head of the orator is concealed under a helmet. That great man, as his biographer assures us, when fatigued by speaking or other exertions, was often seen in the streets of Athens, "leaning on a porch, his head resting on his hand, as if his neck were too weak to support it."

Finally, evidence to the same effect is derived from the correspondence between the intellectual characters and cerebral systems of the inferior animals. In some of the lowest of these, the brain is very simple, and so is the intellect. In others, both are less simple, in others again, still less so, until we arrive at those of the higher orders, where we find considerable complexity in each, the correspondence between them being perfect in every successive grade of our ascent. In man, the brain and the intellect still further correspond, both being much more complex, than in any being below him. He possesses several cerebral organs, and an equal number of mental faculties, in

accordance with them, which are denied to all the inferior animals.

It has been observed, that the human brain is an aggregate of separate organs, and that each of the subordinate ones possesses a faculty and performs a function specifically its own; and that no one of them can execute the work of another. This position rests on the following testimony, which is deemed satisfactory.

By a skilful dissection of the brain, the organs which compose it can be separated, and exhibited sufficiently apart from each other, to verify their existence.

The intellect contains precisely as many faculties, all of them radically different from each other, as the brain does of distinct organs. Is any one of the organs inordinately developed? The faculty belonging to it is correspondingly powerful; and the reverse. Is any of them wanting? The faculty is also wanting. Is any one of them injured, mechanically or otherwise? Its faculty is likewise injured. Is the injury removed, by time or medicines? The faculty is restored.

The second part of our proposition, that each subordinate cerebral organ has a faculty and function of its own, and that no one organ can do the work of another, is sustained by various considerations.

Throughout the other portions of the system, each organ performs its own specific function, and no one can perform the function of another. The eye sees, but cannot hear; the ear hears, but cannot smell; the nostrils smell, but cannot taste; nor can the organ of taste perform the office of either of the other organs of external sense. The stomach digests aliment, the liver secretes bile, the lungs arterialize the blood, the muscles contract, and the skin secretes the matter of perspiration. But no two of these organs can interchange functions. Of the nervous power, the same is true. A nerve of motion cannot perform sensation, a nerve of voluntary cannot subserve involuntary motion; nor, as already shown, can a nerve appropriated to one kind of sensation be instrumental in the performance of another.

When we extend our researches throughout nature, as far as its provisions are known to us, we find the same principle everywhere prevailing. Each organ performs one kind of action, and no more. Nothing but the rose and the violet can produce the delicious perfumes of those flowers; the gland of the musk-ox, formed for the purpose, can alone secrete musk,

and that of the beaver the substance called castor. The vine alone produces the grape, and the apple, peach, orange, and pomegranate trees, each its specific kind of fruit. But no one of those plants can prove the source of the fruit of another. Nor can any one species of the animal kingdom become the parent of another species.

As relates to living action, then the rule of unity, in every other kind of organic structure, is universal and immutable. Why should it be otherwise in the human brain? We should rather ask, Is there a shadow of reason to believe that it is otherwise? We need scarcely reply that there is not, the question being so clear as to answer for itself. The brain is subject to the same laws with other kinds of organized matter. In *it*, unity of structure can no more, by its action, produce sundry diversified results, than it can in the liver, the stomach, or the lungs. The brain as an organic unit, can no more prove the instrument of the many different kinds of sensation and intellection, which belong to man, than the stomach can become the direct means, not only of digesting food, but also of secreting bile, saliva, and perspirable matter, of arterializing the blood, and of performing the functions of vision and taste. These are such clear and undeniable truths, that they may be regarded as settled maxims in physiology. The inference, then, is irresistible, that the brain is not a single organ, performing a multiplicity of functions, but an aggregation of organs, each differing from the others in structure, serving as the instrument of a corresponding faculty, and performing a function peculiar to itself.

We regret that the necessary limits of this article do not permit us to reply to the objections urged against phrenology, on the grounds of materialism, fatalism, morality, and religion. We can only say, at present, and we say it confidently, that all who will take the trouble to study the science, will be convinced that they have no foundation in truth. On the contrary, it might easily be made to appear, that phrenology alone can explain rationally, and render intelligible, the *freedom of the human will;* and that it also proves satisfactorily, that sentiments of both morality and religion belong as essentially to the constitution of man, as the external senses do.

We have often heard it alleged, as an argument, if not against phrenology, in the abstract, at least against the consumption of time in the study of it, that, although it may possibly be true, it cannot be useful, because it has no practical bearing on human affairs. This is a mistake; we think a very singular one.

If phrenology be true, it must, from the constitution of things, become useful, as soon as its several relations shall be understood. Man can render every truth in his possession useful to him, provided he learns to make the proper application of it. To argue in opposition to this, is to charge the AUTHOR of nature with having worked unwisely, and to no purpose. Every truth comes ultimately from HIM, through the laws he has established, and is, in some way, connected with the administration of the universe. For man to be benefited by it, therefore, by applying it to his wants or wishes, it is only required of him to examine it carefully, until he shall fully understand it, and have *learned* its bearings.

But it is not alone on general principles that the usefulness of phrenology admits of defence. Its special advantages are already known, and, did this article allow such a disquisition, might be easily demonstrated, on the present occasion. Furnishing, as it does, a true analysis of the human intellect, it cannot fail to be of the utmost importance, in every process where that is concerned, either as the subject acted on, or as the agent which acts. But that is the case in every human transaction. The intellect must be, in some way, engaged in it. Phrenology therefore is applicable and useful, in whatever tends to the improvement of our race.

Education is the basis of all that is most interesting and important to individual man, and of all that is sound and valuable in society. But that is a process, in which one intellect acts on another, to discipline and strengthen it; to enrich it with knowledge, train it to proper habits, and improve it in all its faculties. No instructor, however, is competent to this work, without a thorough knowledge of that, with which, and on which, it is his business to operate. Deprived of such knowledge, he labors in the dark, and cannot fail to commit error, and do mischief. The reason why our schemes of education are so defective in their nature, and fall so far short of the end aimed at by them, is because they are not in accordance with the human intellect, either in their principles and arrangement, or the mode in which they are administered. And their defectiveness and inefficiency will continue, until they shall be placed under the direction of those, who have a correct knowledge of the constitution of man. But that is imparted by phrenology alone.

Practical ethics and divinity are but branches of education, and can prove useful only, so far as they are adapted to the nature of the human mind. That their labors may be fully

successful, therefore, both moral teachers and the clergy should be versed in phrenology. As soon shall an engineer direct, with safety and due effect, a steam-engine, without a knowledge of its mechanism, as a pastor do his duty successfully to his flock, or any other instructor to his followers, without a knowledge of their mental constitution.

All the proceedings of legislative and *forensic* bodies have a reference to man, as a moral, social, and intellectual being. Nor can those councils ever do justice, and secure right, except through a correct knowledge of him, in that capacity. The numerous and deplorable mistakes committed in them, arise from a want of that knowledge. An acquaintance with phrenology, therefore, would be eminently useful to legislators, judges, lawyers, and jurors.

To physicians this science is still more essential. Without a knowledge of it their education is radically defective. That this is true, as relates to the subject of mental derangement, cannot be denied. Phrenology teaches the correct anatomy and physiology of the brain. Without a knowledge of these, the pathology and diseases of that viscus can never be understood. But madness, in all its forms, is nothing but the result of cerebral derangement. The physician, therefore, who attempts to expound that complaint, or in any way minister to it, without being versed in phrenological science, is so far an empiric. However exceptionable this language may be deemed by some of the Profession now, the time is not far distant, when its truth will be universally admitted, and medical education will conform to it.

Phrenology is further useful and interesting, in shedding light on many intellectual phenomena, which are inexplicable on any other ground. Of these we might specify dreams, somnambulism, supposed supernatural appearances and other visions, and monomania, or madness on a single subject. That all preceding systems of mental philosophy had proved incompetent to unravel these "riddles of the mind," will not be controverted. Their exposition was reserved for phrenology; and that expounds them clearly. Nor is it practicable to acquire, through any other channel, definite and philosophical conceptions of genius, instinct, habit, the association of ideas, mental sympathy, and several other terms and phrases, in common use among those who treat of the operations of the mind. But phrenology gives a clear explanation of them all. It furnishes also satisfactory views of the peculiar combinations of faculties, that constitute fitnesses for the different professions and

vocations, which man pursues in civilized society. Thus, the poet requires one confederacy of mental qualities, the general philosopher another, the astronomer a third, the historian a fourth, the orator a fifth, and the musician, painter, sculptor, and mechanician, each a combination peculiar to himself. We shall only add, that this science may be often made a test of the truth of history and biography; and that it assigns the true causes of the differences between the intellectual, moral, and social characters of different nations, and more especially of the different races of men.

The limits of our article admonishes us, that here our sketch of phrenology must close; and it is abundantly imperfect. Defective, however, as it is, we trust it will contribute somewhat to increase the reader's interest, in what we have yet to say, respecting the volume before us, a more particular examination of which we shall now commence.

Our author represents man as formed and endowed in strict accordance with all things around him, whose influence he feels. He does not consider him, therefore, as in any respect out of place, but believes him to be a fit and well adjusted part of a faultless whole. The general tenor of his remarks might be well interpreted, by the following couplet:

> "If plagues and earthquakes break not Heaven's design,
> Why, then, a Borgia, or a Cataline?"

He further contends, that it is perfectly within the power of man to maintain this fitness, by acting in a way so circumspect and wise, as never to mar the harmony of that portion of creation, to which he immediately belongs. And that in such a course of action consists his welfare.

Like everything else, man is governed by fixed laws, which may be said to grow out of his constitution, and his relation to the objects and influences, in the midst of which he is placed. These are the laws of nature, in reference to himself, and point out his duty. By a faithful observance of them he prospers, and is happy; while pain, or misfortune in some other form, is the penalty, which he never fails to pay for their violation. Conforming exactly to his own nature, these laws are of four kinds, physical, organic, intellectual and moral, such being the variety in the constitution bestowed on him. They are moreover so far independent of each other, that he pays a peculiar and conformable penalty, for the violation of each. Does he transgress a physical law? He suffers physically. An organic law? He suffers in his organic capacity. An intellectual,

or a moral law, or both at once? The punishment corresponds to the fault. But the penalty imposed by one class of laws, is never exacted directly for the violation of either of the others. This is a very interesting and important portion of the general doctrine, of which we shall speak more fully hereafter. The illustrations of the several laws, and their practical application to human concerns, are also peculiarly happy and instructive.

But we find ourselves in danger of getting ahead of our discussion, of doing injustice to our author, and perhaps of being with difficulty understood in our remarks. We must therefore ask to be indulged in premising a little more elementary matter.

As a mere physical being, man is on a par with dead matter. He possesses form, size, color, and weight, and is subject to all the laws connected with those properties. He falls, by gravitation, when not supported, and is liable to mechanical and chemical injuries.

As an organic being, his rank is higher. He possesses life, with all its essential attributes, which, by giving him a new set of relations, subjects him to a corresponding system of laws. It is in this capacity that he is born, takes food, digests and assimilates it, grows, contracts disease from deleterious impressions, recovers his health, propagates his race, declines, and dies. In his mere organic condition, he cannot be said to have enjoyments, because he cannot be said to feel. Vegetables and the lower orders of animals like him are organic, but want sensibility.

As an intellectual and moral being, man's grade, in the scale of existence, is still more elevated. So is the further set of laws, to which he is, in consequence, bound to conform. In this character he perceives, thinks and reflects, and possesses a feeling of moral obligation. Under the latter is included a sentiment of religion. It is equally his duty and his interest to obey each of these sets of laws, attending strictly, in his observance of them, to their respective ranks, and never giving the lower a preference over the higher. In plainer language, he must never obey a physical or an organic law, in opposition to an intellectual or a moral one, the latter being, in the nature of things, entitled to an ascendency. Where no opposition exists, however, and no violence is offered to any conventional compact, it is as much his duty, and as necessary to his well-being, to conform to the lower laws, as to the higher.

The great family of beings, subject to the higher set of laws, includes all animals possessed of a distinct consciousness and power of volition. This class divides itself naturally into the intelligent and animal, and the intelligent and moral. To the first and lower division belong the dog, elephant, camel, and beaver, because they have some intellect, united to a number of animal propensities, but no feelings strictly moral. The second division consists exclusively of man, because, in his constitution alone, true moral attributes are added to the intellectual and animal. The established order of things, therefore, enjoins on the human race a conformity to a more extensive and diversified code of laws, than is imposed on any other description of beings; none of the inferior animals being amenable to the moral law. But if man has a wider and more complicated system of ordinances to obey, he has also more intelligence to discover them, and higher and stronger motives to comply with them. His aptitude to his sphere of existence, therefore, is no less perfect than that of other beings. Everything, whether organized and living, or unorganized and dead, possesses a constitution peculiar to itself, to which it is perfectly fitted to conform. In this respect, all creation is on a level.

But the constitution of man, with its numerous relations, and the laws which grow out of them, with their fitness, as rules for the government of life, can be made known only by a sufficient analysis. And this must he prepared on phrenological principles, no others being suitable to the purpose. To this part of his subject our author has done justice. The following is his analysis of the constitution of man, considered as an animal, moral, and intellectual being; and we cannot, we believe, so highly gratify and instruct the reader, in any other way, as by presenting it to him entire.

"In the *third* place, man is an animal — moral — and intellectual being. To discover the adaptation of these parts of his nature to his external circumstances, we must first know what are his various animal, moral and intellectual powers themselves. Phrenology gives us a view of them, drawn from observation; and as I have verified the inductions of that science, so as to satisfy myself that it is the most complete and correct exposition of the Nature of Man which has yet been given, I adopt its classification of faculties as the basis of the subsequent observations. According to Phrenology, then, the Human Faculties are the following:

Order I. Feelings.

Genus I. Propensities—*Common to Man with the Lower Animals.*

1. Amativeness; Produces sexual love.

2. Philoprogenitiveness.—*Uses:* Love of offspring.—*Abuses*: Pampering and spoiling children.
3. Concentrativeness.—*Uses:* It gives the desire for permanence in place, and for permanence of emotions and ideas in the mind.—*Abuses:* Aversion to move abroad; morbid dwelling on internal emotions and ideas, to the neglect of external impressions.
4. Adhesiveness.—*Uses:* Attachment; friendship, and society result from it.—*Abuses:* Clanship for improper objects, attachment to worthless individuals. It is generally large in women.
5. Combativeness.—*Uses:* Courage to meet danger, to overcome difficulties, and to resist attacks.—*Abuses:* Love of contention, and tendency to provoke and assault.
6. Destructiveness.—*Uses:* Desire to destroy noxious objects, and to kill for food. It is very discernible in carnivorous animals.—*Abuses:* Cruelty, desire to torment, tendency to passion, rage, harshness and severity in speech and writing.
7. Constructiveness.—*Uses:* Desire to build and construct works of art.—*Abuses:* Construction of engines to injure or destroy, and fabrication of objects to deceive mankind.
8. Acquisitiveness.—*Uses:* Desire to possess, and tendency to accumulate, articles of utility, to provide against want.—*Abuses:* Inordinate desire for property; selfishness; avarice.
9. Secretiveness.—*Uses:* Tendency to restrain within the mind the various emotions and ideas that involuntarily present themselves, until the judgment has approved of giving them utterance; it also aids the artist and the actor in giving expression; and is an ingredient in prudence.—*Abuses:* Cunning, deceit, duplicity, lying, and, joined with Acquisitiveness, theft.

Genus II. Sentiments.

I. *Sentiments common to Man with the Lower Animals.*

10. Self-Esteem.—*Uses:* Self-interest, love of independence, personal dignity.—*Abuses:* Pride, disdain, overweening conceit, excessive selfishness, love of dominion.
11. Love of Approbation.—*Uses:* Desire of the esteem of others, love of praise, desire of fame or glory.—*Abuses:* Vanity, ambition, thirst for praise independent of praiseworthiness.
12. Cautiousness.—*Uses:* It gives origin to the sentiment of fear, the desire to shun danger, to circumspection; and it is an ingredient in prudence.—*Abuses:* Excessive timidity, poltroonery, unfounded apprehensions, despondency, melancholy.
13. Benevolence.—*Uses:* Desire of the happiness of others, universal charity, mildness of disposition, and a lively sympathy with the enjoyment of all animated beings.—*Abuses:* Profusion, injurious indulgence of the appetite and fancies of others, prodigality, facility of temper.

II. *Sentiments proper to Man.*

14. Veneration.—*Uses:* Tendency to worship, adore, venerate, or respect whatever is great and good; gives origin to the religious sentiment.—*Abuses:* Senseless respect for unworthy objects consecrated by time or situation, love of antiquated customs, abject subserviency to persons in authority, superstition.
15. Hope.—*Uses:* Tendency to expect and to look forward to the future with confidence and reliance; it cherishes faith.—*Abuses:* Credulity, absurd expectations of felicity not founded on reason.
16. Ideality.—*Uses:* Love of the beautiful and splendid, the desire of excellence, poetic feeling.—*Abuses:* Extravagance and absurd enthusiasm, preference of the showy and glaring to the solid and useful, a tendency to dwell in the regions of fancy, and to neglect the duties of life.

WONDER.—*Uses :* The desire of novelty, admiration of the new, the unexpected, the grand, and extraordinary.—*Abuses :* Love of the marvellous, astonishment.—*Note.* Veneration, Hope, and Wonder, combined, give the tendency to religion ; their abuses produce superstition and belief in false miracles, in prodigies, magic, ghosts, and all supernatural absurdities.

17. CONSCIOUSNESS.—*Uses :* It gives origin to the sentiment of justice, or respect for the rights of others, openness to conviction, the love of truth. —*Abuses :* Scrupulous adherence to noxious principles when ignorantly embraced, excessive refinement in the views of duty and obligation, excess in remorse, or self-condemnation.
18. FIRMNESS.—*Uses :* Determination, perseverance, steadiness of purpose. —*Abuses :* Stubbornness, infatuation, tenacity in evil.

Order II. INTELLECTUAL FACULTIES.

Genus I. EXTERNAL SENSES.

FEELING OF TOUCH.
TASTE.
SMELL.
HEARING.
LIGHT.

Uses : To bring man into communication with external objects, and to enable him to enjoy them.—*Abuses :* Excessive indulgence in the pleasures arising from the senses, to the extent of impairing the organs and debilitating the mind.

Genus II. INTELLECTUAL FACULTIES—*which perceive existence.*

19. INDIVIDUALITY—Takes cognizance of existence and simple facts.
EVENTUALITY—Takes cognizance of occurrences and events.
20. FORM—Renders man observant of form.
21. SIZE—Renders man observant of dimensions, and aids perspective.
22. WEIGHT—Communicates the perception of momentum, weight, resistance, and aids equilibrium.
23. COLORING—Gives perception of colors.

Genus III. INTELLECTUAL FACULTIES—*which perceive the relations of external objects.*

24. LOCALITY—Gives the idea of space and relative position.
25. ORDER—Communicates the love of physical arrangement.
26. TIME—Gives rise to the perception of duration.
27. NUMBER—Gives a turn for arithmetic and algebra.
28. TUNE—The sense of Melody arises from it.
29. LANGUAGE—Gives a facility in acquiring a knowledge of arbitrary signs to express thoughts—a felicity in the use of them—and a power of inventing them.

Genus IV. REFLECTING FACULTIES—*which compare, judge, and discriminate.*

30. COMPARISON—Gives the power of discovering analogies and resemblances.
31. CAUSALITY.—To trace the dependencies of phenomena, and the relation of cause and effect.
32. WIT—Gives the feeling of the ludicrous.
33. IMITATION.—To copy the manners, gestures, and actions of others, and nature generally."

From this excellent tabular view of the constitution of man, the relative standing and value of his faculties are easily learnt; and that knowledge, when attained, not only points out the various classes of his duties, but removes all obscurity from their relations to each other, as higher and lower, more or less binding and imperative. In doing this, it indicates also the superi-

ority of one set of the natural laws over another, and shows which of them ought to govern the rest, and, therefore, which should be, in preference, obeyed.

Of the "Feelings," the animal propensities, with their laws, are the lowest, and least worthy. Next in rank are the sentiments common to man and the inferior animals; and the highest of this "Order," which are appointed to control the others, are the sentiments proper to man.

Of the "Intellectual Faculties," those of the lowest grade are the external senses, with their corresponding laws. Next are the intellectual faculties, "which perceive existence." Third in rank are the intellectual faculties, "which perceive the relations of external objects;" and last and highest of the "Order," are the reflecting faculties, "which compare, judge, and discriminate." Where the latter faculties forbid it, therefore, the indulgence of the others is faulty.

In his exposition of these points, the remarks of our author are worthy of high commendation. His "Section" on the "supremacy of the moral sentiments and intellect," is one of the most interesting and valuable in his book. He shows the animal propensities to be all selfish, without any direct reference to social good. As far as they predominate, therefore, they disregard the interest and welfare of others, and seek personal gratification alone. Hence, when inordinately indulged, they injure their possessors and lead to crime. When thus unbridled, they are indeed the only sources of crime. A principal object in education, should be to regulate and restrain them. The means of doing this, is to strengthen, by cultivation, the higher faculties appointed to control them.

The four sentiments common to man and the lower animals, are of a more elevated cast. Yet, even of these, the three first are strongly tinctured with self. So far they are narrow and unsocial, and comparatively low in value. As respects benevolence, the case is different. It seeks instinctively the good of others, and performs kind and useful actions for their own sake. It is therefore social and praiseworthy. When directed by enlarged views of human happiness, it swells into philanthropy.

Of a higher order still are the sentiments proper to man. They are as fully divested of selfishness as human feelings can be, or ought to be. The cases, in which personal considerations should be entirely disregarded, are rare. It is sufficient to say of feelings or wishes, that their chief end is the good of society. And this is true of the sentiments we are considering.

The laws in accordance with them, therefore, are of paramount authority. All indulgences forbidden by them are faulty.

The relative rank of the four families of intellectual faculties has been already referred to. They rise above each other, according to the order, in which they are laid down, in our author's tabular view of them. The laws of the fourth genus are consequently paramount to those of the other three. To confirm their ascendency, they are always in harmony with the laws of the sentiments proper to man. To awaken these two sets of faculties to action, and give them strength and correct habits, constitutes the highest aim of education. The most exalted standing, to which the human race can attain, is that of moral and reflecting beings. To render such a condition general, would be to realize the millennium.

[To be concluded in our next.]

Art. III. — Massachusetts Charitable Eye and Ear Infirmary.

The last annual report of the surgeons of this institution contains the following table showing the number of applicants, and their respective diseases from October 28, 1831, to October 11, 1832.

The cases and remarks upon them, which follow the table have been furnished us by John Jeffries, M. D., one of the surgeons of the Infirmary, who has accompanied his present valuable contribution, with the promise of similar communications on *iritis*, and *purulent ophthalmia*, for future numbers.

E.

Abscess of eye-lid		Hydrophthalmia	2
" of lachrymal sac	1	Hypopium	1
Amaurosis	30	Glaucoma	1
Cataract	8	Granular lids with varicose cornea	10
Closure of the pupil	1	Intermitting pain in eye	1
Corneitis	2	Iritis primary	1
Ectropeon	7	" secondary	2
Entropeon	2	Lippitudo	75
Ecchymosis of the conjunctiva	2	Morbid sensibility of the retina	37
Epiphora	1	Muscæ volitantes	1
Fistula lachrymalis	2	Nyctalopia	2
Frena of the conjunctiva	2	Obstruction of nasal duct	10
Foreign substance in the cornea	12	Œdema of the lid	1
Fungus tumor of the lid	8	Onyx	2
Hordeola	2		

Opacity of the cornea	18
Opthalmia acute	92
" chronic	62
" erysipelatous	3
" with porrigo	2
" purulent	2
" " of infants	1
" pustular	22
" rheumatic	1
" strumous	15
Prolapsus of irides	3
Pterygeum	4
Ptosis	2
Pustule of the lid	1
Ulcer of the cornea	24
Staphyloma	3
Tinea cilianis	37
Tumor of conjunctiva	1
" of the lids	16
Wounds and injury to the eye	7
Total of affections of the eye	541

DISEASES OF THE EAR.

Abscess in the concha	6
Deafness without external cause	25
Foreign substance in the concha	2
Fungus tumor	1
Herpes of the ear	4
Obstruction of the concha	23
" of the eustachian tube	4
Otitis	16
Ottorhea	38
Total of affections of the ear	119
" " eye	541
Total cases	660
Of these, there have been cured	512
Relieved	52
Considered incurable or not treated	58
Under treatment	38
The whole number treated at the infirmary since its establishment	5360

The report of the surgeons accompanying the above statement of diseases, which was made at the annual meeting of the subscribers, had reference only to the general interests of the institution, and would not therefore gratify particularly the medical public. It is on this account, not published in this journal.

AMAUROSIS.

The frequent occurrence of this disease, and its interesting character under any circumstances, induces the publication of the following cases illustrating the complaint under the several divisions of *functional amaurosis* as a primary affection and as sympathetic from gastric derangement, and *organic amaurosis* from violence or diseased texture.

Case of primary functional Amaurosis. — Mrs R. P., aged 60, born in Leicestershire, England, applied to the Infirmary, November 16, 1831, for an impaired state of vision. Her sight did not permit her to distinguish her own family from strangers, or enable her to take the food placed before her. The eye looked dull and watery — the pupil acted very sluggishly — the vitreous humor appeared somewhat opaque, and of a slightly greenish cast.

She stated that her occupation for several years past, had been to seam stockings in a weaving factory; which requires a long continued and close application of the eyes. Her vision

began to fail six months before her application to the rooms. At first objects appeared as if seen through smoke, and light had a glimmering appearance. Pain on using them, or when exposed to much light, soon followed. The pain increased in severity and continuance. It was sometimes in the globe alone, and sometimes extended severely to the occiput. Objects of a uniform color appeared variegated; this symptom was not constant, but occurred on different days, or on different parts of the same day. She thought her vision was worst at noon. There did not appear to be any gastric derangement or constitutional affection.

She was cupped to faintness on the back of the neck, and directed pills of calomel and opium until slight ptyalism should be produced. The pain was removed by the cupping, and the vision began to improve in a few days when the gums had become tender.

She continued the use of the mercury until the second of December, when it was stopped in consequence of its injurious effect upon the bowels. Her sight had then so much improved that she could tell the hour by the watch. She continued steadily to improve in vision although she was under treatment for some time, for slight external affections of the eye. The report in April, 1832, is as follows. "Her vision is perfectly good, so that she can engage in her occupation as a seamstress, and use her needle as readily as at any time the last twenty years. Her eyes have improved in strength and her general health is good."

Case of Organic Amaurosis from injury — an out patient attended by E. J. Davenport, M. D. — Mary Watts, aged 24, of a full habit, somewhat in the use of spirituous liquors, applied for relief on the 22d of August, 1832. About the 9th inst. she fell when ascending a flight of steps, receiving the force of the blow upon the right malar bone, near the outer angle of the orbit; by the violence of which she was stunned. Considerable swelling of the face, and especially of the lids, together with much ecchymosis of the conjunctiva, immediately followed the accident. The effect of an emetic lately taken, produced a similar effect upon the conjunctiva — with this exception she has never had any defect or imperfection of the eye. In two days after the injury the globe and neighboring parts became sore and painful. This was much aggravated by daily vomiting, which her hab s had induced each morning. In a week from the time of the blow, she found an imperfection of

the sight, which had continued to increase up to the period of her application.

August 22. There is ecchymosis of the conjunctiva, and swelling of the integuments still remaining. She has double vision — objects appear larger than natural, with the affected eye. With this eye she cannot discern any object from the outer canthus, but on turning the eye to the inner angle, she can see even small letters distinctly for a moment, but on attempting to read, the words become indistinct, and she is compelled to desist, from the excess of pain produced. There is much pain all the time. Intolerance of light and some epiphora. The pupil dilates and contracts readily. Her tongue is coated — bowels regular — pulse full and hard — catameria just returned. She was cupped in the temple until she fainted, and directed to take cathartic doses of aloes and mercurial pill night and morning. The pain was greatly relieved immediately after the loss of blood.

August 24. But little pain since the cupping — the vision much improved — she can now see objects in front of the eye almost distinctly ; but not on the right side. She has pain on using the left eye, and after a short time a gloss is thrown over objects seen with either or both eyes. Her tongue is coated — pulse one hundred and twenty, hard and small. She is under the influence of alcohol, which she confesses to have taken freely each day. She has not taken the pills, but substituted salts. She was directed to apply leeches freely to the temples — repeat the cathartic — entire rest — and desist from stimulants.

August 27. Vision better — the pupils are dilated in a dim light — pulse one hundred and twenty — tongue cleaner. Has continued the use of spirits.

From time to time leeching or cupping was pursued with the occasional action of salts, the only medicine she would take, from the above date until the 22d of September, when the report closes with, — Vision nearly as good as ever — a slight weakness only remaining. Can use the eyes without pain. The appearance of the eye is clear and healthy. She has been constantly under the influence of spirituous liquors throughout the treatment of her complaint.

This case was similar in some respects to morbid sensibility of the retina, and seems to point out in what cases of this latter affection, bleeding is most beneficial. It is when there is congestion of the inner tunics. Another observation to be made is the beneficial effect of bleeding to remove the immediate influence of alcohol in disease. It has often been noticed at the infirmary in complaints of the eye.

The actual condition of the eye in the case recited, appears o have been this. By the injury there was a slight extravasation of the choroid on the nasal side. And after this, congestion from undue use of the organ and the use of spirits. This last was removed by bleeding and the first was gradually absorbed.

In illustration of *Functional Amaurosis* from sympathy may be offered, the following case of *Nyctalopia*.

Neil Miller, aged 30, a seaman — by birth a Swede, was suddenly and without any external cause affected with blindness, in the night about the first of July, while in Rotterdam. On the following morning vision was restored. This recurred for three days, after which he continued well for five weeks; when the nyctalopia once more returned on his passage to Baltimore, and has continued ever since.

Sept. 16, 1832. The eyes are bright except that the sclerotic is tinged with bile. Pupils contract and dilate freely. He can see by day distinctly, but as evening comes on his sight grows dim until he cannot discern any object whatever. A candle near the eye produces only an impression of a lurid glare.

His skin is sallow — tongue somewhat coated — appetite, &c, good. He has been for a short time before his attack in the West Indies.

℞ Submur. Hydrarg. gr. viij.
Pill Aloes et Colocynth. gr. xvj.
Pulv. Tart. Antimon. gr. iv.
M f. pill, iv.

Quanum duos statim et postea unam omni hora ad emesim sumat. Mane potio Sennæ et Mannæ sumenda.

Sept. 22. Reports that he took all the pills as directed, which produced powerful emetic and cathartic affects, in the evening. In two hours after the first operation his vision was perfectly restored and has continued so since. He has resumed his duties on board his vessel, which he had been compelled to leave.

This case might stand almost literally as to the history, treatment and result for every case of nyctalopia which has ever been presented at the Infirmary.

In all, there has been the same surcharge of bile, resulting from a longer or shorter residence in a warm climate — and the same happy result from the effect of a powerful emetico-cathartic.

Corneitis.

Acute inflammation of the cornea has been observed to present itself for treatment as a primary disease more frequently of

late than formerly. Two cases are reported as simple inflammation. These were severe but immediately reduced by powerful depletion. In others the inflammation extended to the other textures, which have been reported as acute ophthalmia. In one of these matter was deposited into the anterior chamber, producing spurious hypopium. This last case was the following:

Sarah Pratt, aged 4 years, has had measles about four weeks previous to her application to the Infirmary, which left her with some degree of lippitudo. Acute ophthalmia soon followed this, which from the account given appears to have commenced in the cornea and extended to the conjunctiva. There has been great intolerance of light and much suffering. In the day her eyes are closely covered with her hands and at night her face is buried in the pillow. At the time of her first application, Aug. 27, the conjunctiva of the left eye had considerable secondary inflammation. The cornea had just below its centre a circular spot, of a yellowish cast, somewhat elevated from the surface. This was an abscess of the cornea — around which there was a diffused opacity. General health much deranged, with marks of a strumous constitution. She was directed to have leeches freely applied until the pain should be relieved. The diet was regulated — and the disordered gastric secretions were met by alterative cathartics.

On the 29th Aug. a small line of pus was seen at the bottom of the anterior chamber, showing the abscess to have burst inwardly. The active depletion was continued with tepid local fomentation for some days. On the 5th Sept. the general ophthalmia was much reduced — the redness of the conjunctiva being much less, but the ciliary zone remained much injected. There was a depression of the cornea over the abscess. The deposite in the anterior chamber much increased. The eye was without pain — she could bear a moderate light. The tongue had cleaned — the alvine dejections became more natural, and sleep quiet and refreshing. In conjunction with the former treatment a blister was applied behind the left ear. After this time the abscess ceased to deposite any more, and a restorative process proceeded rapidly. On the 17th Sept. the pus was wholly absorbed — the breach in the cornea had cicatrized — and there remained only a small interstitial opacity of the cornea so far below the pupil as not materially to impede vision.

Primary inflammation of the cornea, if early and promptly treated, runs very readily, as in the above case, into onyx or unguis. Sometimes from the pressure of the matter in the anterior chamber, disorganizing inflammation is induced in the

inner textures, and the eye is lost by suppuration or stophyloma; even in despite of the most active depletion. In general, however, the abscess bursts externally from that law of inflammation by which pus makes towards the surface. Besides which favorable circumstance, the inflammation may be arrested before it proceeds to suppuration, or extensive ulceration, as may be illustrated by the following case of Corneitis.

Patrick O'Brien, aged 24 years, by occupation a brick-layer, had been exposed in wet weather, and taken cold, which had produced a slight ophthalmia of the left eye. Ten days after this the inflammation suddenly increased with severe pain in the ball, forehead, and through to the occiput. At the same time vision began to fail so that he could not distinguish objects.

Aug. 29, the period of his first application, the appearance of the eye was as follows: but very little congestion of the conjunctiva — the zone around the cornea was fully injected and distinct. The cornea had diffused opacity generally more dense in the centre — a number of small dense spots appeared on the cornea, which were pustules; these appeared slightly elevated when viewed obliquely. He had great intolerance of light and continual severe pain.

He was bled from the temporal artery until he fainted, and was directed an active cathartic of salts and comp. powder of jalep daily, until free catharsis should be produced.

Aug. 31. His eye was perfectly easy. His only complaint was dimness of vision. Conjunctiva was clear — the zone quite indistinct. Slight cuticular ulceration had followed the pustules. To these a solution of nitrate of silver was applied. The depletive course was also continued. On the 14th September the inflammation had entirely gone — the ulceration healed and the opacity nearly cleared off. He had for some days ventured to his work.

For a future number of your Magazine I shall offer some remarks and cases of two of the most interesting diseases of the eye viz. *Iritis* and *Purulent Ophthalmia*.

With regard yours, &c.

John Jeffries.

Art. IV. — Massachusetts General Hospital.

We witnessed at the Mass. General Hospital a few weeks since, the operation described in the following communication, which is from the Senior Surgeon of that institution, Dr J. C. Warren. It was manifestly and eminently a triumph of surgical science and art, intelligently and ingeniously applied to the case in hand; and as such stands in gratifying contrast to the empyrical and irregular practices too often submitted to in such cases, which, sometimes by happy accident successful, and always conspicuous for the pretension attending them, have everywhere found favor with the ignorant and vulgar, and not unfrequently are preferred by those whom we should otherwise consider capable of discriminating between science and charlatanism. In this case, a young, healthy and intelligent man was restored to the perfect use of his limbs, who, but for the interposition of surgical science employing the best mechanical facilities it can command, must have remained an impotent cripple for life. We envy the individual who is chiefly instrumental in rendering so inestimable a service to a fellow-being, more private gratification attending such a benefaction, than all the additional professional fame which it cannot fail to confer.

E.

[To the Editors of the Boston Medical Magazine.]

At your request, I will give an account of the means employed in the operation you attended, for reducing a dislocation of the Os femoris, after it had been out between seven and eight weeks.

The patient a muscular man, 27 years old, was wrestling on a deep sand. His antagonist succeeded in throwing him, and fell across his thigh — his foot at the moment, being deeply embedded in the sand. When he attempted to rise he found himself hurt in the right hip, but being able to stand, no dislocation was suspected for some weeks, when it was discovered by a practitioner in the vicinity, who advised him to come to the Hospital.

The limb was found to be s ortened between 3 and 4 inches— the foot was turned in — the motion of the limb very limited — the natis ofthe right side broader than the other — the head of the Os femoris was felt very distinctly on the dorsum ilii; the trochanter in front of it; and a sensible excavation in the groin.

A consultation being held, consisting of Drs Ingalls, Dixwell, Brown and Walker, itwas agreed to be a proper case for

making an attempt at reduction. This, I accordingly put in execution with the assistance of my colleague, Dr Hayward.

The patient was put in the warm bath an hour before the operation, and took small doses of a solution of Tartrite of Antimony during that time, without any perceptible effect. He was then placed on a table on his back, as near the edge corresponding with the right side, as possible. A band well padded, was passed over the right groin and secured by a cord to a ring three feet below the level of the table, in an oblique direction outwards. Another band was carefully strapped above the knee, and secured by a cord to a ring, three or four feet above the level of the patient, in an oblique direction inwards, so as to draw the lame limb a little across the other. The dislocation pulleys were then attached and a moderate, gradual extension applied. Now, a vein in the left arm was opened, and the blood allowed to flow, till the pulse was reduced as much as was thought consistent with the safety of the patient, who became at length very faint and vomited. The extension was continued 40 minutes without remission. The limb was drawn down so as to be as long as the other; but no appearance of a reduction manifested itself. Then causing a round towel to be placed over the upper third of the limb, I seized the leg and flexing it as much as possible on the thigh, pushed the knee upwards and outwards in the direction of the head of the bone, which was distinctly moved from its lodgement. A repetition of the same manœuvre, accompanied with the greatest possible flexion of the thigh bone on the pelvis in the direction of the head of the bone, threw the latter from its situation and it entered the socket with a perceptible noise, and an impulse perceived by the patient and those about him.

The consequent accidents were slight, and in eleven days the patient left the hospital perfectly well and walking without inconvenience.

The reduction in this case was very satisfactory to the gentlemen who attended, from the very moderate force by which the bone was turned into its socket, after the preparatory steps had been taken.

In three other cases of the same species of hip dislocation, occurring within the last two or three years, a different manœuvre has succeeded in each case, after the application of pulleys, and has forcibly reminded me of the remark of Sir Astley Cooper,—that various modes of operation may be advantageously employed in cases which are similar.

In one of these, the bone had been dislocated a week. The

pulleys and other means had been used. The dislocation did not yield. The man was then placed on his side. Dr Fisher, whose patient he was, placed a round towel on the inside of the limb and threw it over his shoulders; while this was doing, I seized the foot and rotating it strongly outwards, the dislocation was reduced.

In another case at the Hospital, the limb after extension was brought near to a right angle with the body; and extension in that direction, was soon followed by a return of the bone to its socket. However, I think that in this case the rotation was more effectual than the cross extension.

The remaining case occurred at Plymouth, in this State, and was attended by Drs Hayward, Mackie and Warner of that place, who assisted me in the reduction. After an extension of 20 or 30 minutes, I requested Dr Hayward to rotate the foot outwards, then grasping it below the knee, I rotated and abducted the limb, and the bone readily entered its socket.

In dislocations of the Os femoris in the dead body, I have noticed, that as the limb, after a partial division of the ligaments can rarely be displaced without a movement of rotation; so it can scarcely ever be returned to its socket, without a similar movement.

INTELLIGENCE.

Mr Charles Smith, a graduate of the London Veterinary College, has lately established himself in this city. He bears with him the most satisfactory testimonials of having passed through a thorough course of instruction in the various branches of science pertaining to his profession, under distinguished men, who teach and practise it in Great Britain, and we are happy to be able to add, from some personal acquaintance with him, that he appears to have improved these advantages so as to render him worthy of the respect and patronage of our citizens in the useful profession to which he has devoted himself.

There have been no cases of Cholera in this city, since our last, with the exception of a single one which occurred and terminated fatally, in Marshal's Lane, about two weeks since. But it broke out with considerable activity, during the last week in November, at the House of Industry, which is situated on the southern shore of the harbor, about two miles from the centre of the city.

Although, unequivocally cholera, the disease in this place did not generally manifest the intensity which characterized the attacks of it which had previously occurred in the city; but was more mild and manageable, as has everywhere been the case during the waning of the epidemic.

The Phrenological Review of Combe, which is begun in our present number, is from the productive pen of Dr Charles Caldwell, of Kentucky— the most active American Phrenologist.

COLLECTANEA.

Sketch of the State and Practice of Medicine at Constantinople. By C. Bryce, M. D.

The influence which Islamism exercises over the minds of its proselytes, explains the reason why medicine should have retrograded, or at least had its progress arrested, in Turkey, and why its native medical science is only the remains of former times, disfigured and disguised under a thousand forms. And though the murmurs of affliction, the solicitation and avidity for advice and remedies, with which a European is assailed on his first professional intercourse with Turks, may seem incongruous with reliance on the dogmas of fatalism, yet they cannot be regarded as contradicting this opinion. Further observation and inquiry discover, that this pervading spirit proceeds rather from indifference to their creed, and an extravagant and false impression of the virtues of drugs, than from a just sense of the attributes of the physician; and therefore it is, that, on the one extreme, the Egyptian, Asiatic, and lower classes of Turks of the capital, resign with ignorant confidence their calamities to the dispensations of Providence, or only resort to curative means when their mental energies are subdued; and that, on the other, the majority, especially of the higher classes, who commonly disguise any scruple of conscience under the assumption that their ailments are merited chastisements for indulgence in licentiousness, revere medicine, if correctly applied, as an infallible means of restoration. This explains the inconsistence in the Osmanli character and principle; and we can distinguish between the Mussulman in his state of native prejudice, and the Mussulman whose ideas and feelings have been controlled by the revolution of opinion, manifestly expressed of late years in the capitals of Turkey and Egypt.

The chief source of medical practice amongst Turkish practitioners springs from that spirit of charity which so largely pervades Islamism, and of which the foundation of hospitals and the establishment of schools form a prominent feature. Of the former there are several at Constantinople either endowed by revenues from mosques, or directly supported by government, of which the medical attendants are Turks, under the appointment and control of the Hakim Bashi, or first physician to the Sultan.

Their internal economy and medical management are, it is true, alike defective, if judged by the double object we propose in such establishments, a charitable institution and a school for instruction; but their immediate general usefulness is not less conspicuous, and their existence affords the ready means at any future period of extending their advantages. The mad-houses, although disgustingly kept, and offering the most deplorable objects to the curiosity of the stranger, show how wisely the prophet made his scheme of legislative religion subservient to the calls of humanity. Of the schools at Constantinople one is particularly dedicated to medical science, or, more correctly was, — for, if actually not altogether abandoned, its object is entirely superseded by the new school lately opened, of which I shall afterwards speak. The only previous preparations for this study required of the students, who on an average amounted to thirty, was a competent knowledge of the Arabic, in which language, under the direction of Turkish teachers, they read, and learnt to explain the ancient Egyptian and a few European authors. In this course of instruction, which occupied two hours daily, little if any reference was made to anatomy or chemistry; and even attendance at hospitals was not comprised. Six or seven years were thus employed, when, without any form of examination, and by a simple license or permission from the Hakim Bashi, the doctoral bonnet might be assumed, and the person was held qualified for the first professional employments of the state. The present Hakim Bashi and his brother, physician in chief of the army, are from this school.

From my observations and inquiries amongst this class of practitioners, the study of medicine is reduced to the knowledge of a few doctrines; and the practice thence promulgated accords with this simplicity. The leading principles are to recognise only three classes of diseases; depraved humors, sudden cold and great heat; and accordingly, to admit three forms of cure; purgatives, heating medicines, and refrigerants. Other Turkish nosologists adopt a different system, in which all diseases are distinguished into three orders, — namely, *Nevazil*, — *Mayazil*, — and *Yel*. To the first, which answers to the genus *Catarrhus* of the ancients, belongs almost every disease which has its seat in the head, throat, and thorax. Diseases of the abdomen and affections of the skin are ranked in the second order, which may be translated *hemorrhoidal*. The *Neuroses*, whether or not accompanied by *pyrexia*, affections of tendinous parts, &c, are placed in the third class. *Yel* signifies wind; and to its presence and inordinate localities are ascribed the most severe and the most opposite complaints. Other incongruous ailments, not assorting easily with these genera, are implicitly believed to be the effect of Satanic influence; and the treatment of these is, as it should

be, entrusted to churchmen, who make, as in other more enlightened countries, a lucrative business, by offering prayers, and employing exorcism for the deliverance of those affected.

In prescribing, vegetable preparations are usually preferred, which, as indeed every quality of drug, is administered in the simplest form. It must, however, be said that if their drugs are subjected to few alterations in the laboratory, yet in the physician's hands they are compounded in the most ignorant manner, medicines of very opposite virtues being combined in a prescription of fifteen or twenty different drugs; and the more lengthy the writing, the more complex the remedies, the more highly are the skill and learning of the prescriber estimated. Solid purgatives of the strongest kind are freely administered, the more so that Moslemen have a great repugnance to enemata. Syphilis has been long successfully treated by purgatives and sudorifics, joined to the use of the vapor-bath, continued during twenty or thirty days, or until the patient be much exhausted; and this condition is considered as indicating a speedy cure. Emetics are little used, from a great aversion to vomiting. An opinion of a vitiated state, or false course of the blood, enters largely into their explanation of the cause of diseases; and bleeding, either general or local, fortunately is abundantly pursued; though much of the efficacy of the former is deemed to depend on the nicety with which the physician distinguishes what vein should be opened.

But it is not to the application of rules, or the exhibition of drugs alone, that the Ottomans confide in their treatment of maladies. Ignorance makes them reverence a variety of superstitious remedies; and Turks holding the highest posts of learning and rank are not ashamed to employ openly these productions of fanaticism and charlatanism. Of this credulity religion is the common basis; and it is matter of daily occurrence to find the Iman supplant the physician, or at least his mediation sought to aid the virtue of the prescription. The practice is varied according to the caste of the Dervisch, and qualified with pomp and ceremony corresponding to the quality of the invalid or price paid. To some the practitioner prescribes a course of several days' reading from the Koran, with certain forms of breathing on the patient by one or more of the initiated; while others are ordered to combine the swallowing of bits of almonds, or of pork, eating off particular plates, having words written on them, and in fevers to tie knotted threads on the wrists and ancles.

These simple plans of empiricism, or of gross superstition, are frequently abandoned by the people, especially in lower complaints, for a treatment that so closely resembles magnetism, that were it not for its more distant origin, it might be pronounced a variety of that process. The operator consulted listens to the case with the utmost seriousness, refers to his Koran, and having chosen and written an appropriate passage, folds it in a mysteri-

ous manner, and prescribes this to be worn in contact with the part affected; after which, the fingers smeared in saliva are stroked over the supposed seat of disorder, and prayers are recited at three intervals. As Dervisches and Imans are the privileged in this function, it is not to be wondered at if it exercises some influence over Osmanlies; but Christians and Jews likewise have recourse to these magnetizers, who change nothing of their spiritual remedies in regard to Greek, Armenian, or Jew. It is singular enough that the saliva and breathing are used in imitation of Christ resuscitating the dead child, and restoring hearing to the deaf man by anointing with spittle. Patients are often directed to swallow several times a-day, slips of paper on which the name Allah or Mahomet has been written by some venerated priest or hadgi. Much faith is also placed by Mussulmans in the efficacy of water sanctified by holding in solution passages of the Koran, which an Iman has traced with ink on the inside of the cup; and, incredible and absurd as it may seem, it has happened to several European practitioners in Turkey to find on their second visit that the true believer has deemed swallowing the prescription left him more advisable than sending it to the apothecary. In further illustration of this spirit of fanaticism, I may add that I saw in Egypt, and the caste may be traced throughout Turkey, Arabian conjurors, whose name corresponds to Messiah, from whom they pretend to derive their science as chief of the sect. Their peculiar province is to neutralize by charms the venom of serpents and scorpions, and render innoxious the bite even of the Abushahat.

Besides the drugs prescribed to alleviate sickness, many more are used in health, from the influence of climate or education, rendering people unsatiable of voluptuousness. Some are used to acquire plumpness and beauty of the skin, as mucilages, feculent fruits, and seeds; others, as cosmetics, composed of fine oils, the fat of animals, odorous resins, alkaline and metallic soaps, prepared with great care and by difficult processes. But the virtue of these remedies, and the chief cause of their being sought after with such avidity, proceeds from their being always mixed with various excitants and stimulants. The most valued variety, however, of this class of drugs and compositions is that used with the intention of affording enjoyments, whether real or ideal. The common sort is that formed from opium, hellebore, and strong aromatics. The more rare and expensive is the *philonium*, consisting of fine opium with ambergris, musk, essential oils, and saffron, and the theriac.

The Egyptians boast that they are the only possessors of the latter, and accordingly prepare it publicly and with great solemnity at Cairo, where it forms a considerable article of commerce, being thence carrried to all parts of Asia, and where the profits of its sale are devoted to charitable institutions. The immediate

effects of all these mixtures are to stimulate the nervous system, to dissipate melancholy, and give courage and confidence, and during artificial sleep to procure that state of joyous dreamy delirium in which the imagination dwells on pleasant images only. But these transient moments of ecstasy are followed by hours of distress revolting to humanity. The dismal scenes I viewed from the abuse of these agents in Egypt, however vividly impressed on my mind, seemed far below the depravity to which it has reduced the theriacs of Constantinople. Their physical powers are only the shadow of being, and their mental, when roused by the largest doses, scarcely evince the faculty of thought or feeling.

In this sketch of the state and practice of physic peculiar to the Turks, and restricted to a small proportion of the profession at Constantinople, the larger towns of the empire, or even in the interior of the country, we lament the unimproved condition of the simplest, and the prevalence of superstition in the more complex, forms of its exhibition. But a different feeling must move us in our exposition of the state of medical practice in the hands of Greeks and Jews. In the former, the errors of ignorance prevailed, and were more prejudicial to science than to humanity; among the latter, the cunning of charlatanism predominates, mocking the character of physician under the most interested guises, and degrading the profession to a level with the meanest handicraft. To illustrate this seemingly harsh sentiment, it is necessary to premise that the Turkish administration, by a singular anomaly, gives a free license to all foreigners to proclaim themselves doctors without being subjected to any examination, or required to exhibit testimonials of their studies or qulaifications; and hence, although the proportion of practitioners, of one description or other, at Constantinople, exceed that of any European capital, yet not twenty of this number could be selected who have received a regular medical qualification. This extraordinary absence of restrictive laws probably arose from the scarcity, if not absence, of native professional talents, and the insufficiency of the means of obtaining medical knowledge; and it is continued by the partiality shown to Europeans; add to which, that the title of physician is held in the highest esteem by Turks, even to the rendering the name of Giaour acceptable if so qualified, and that the moral disposition and uniform ignorance of Turks, Armenians, and Greeks, disposes them to yield, without inquiry, a ready confidence to any one who enjoys reputation false or just, or who by a certain mannerism adapted to their capacities, knows how to render himself agreeable to their peculiarities. The consequence of these inducements and privileges is, that general practice, and in some instances the most lucrative and respectable, is engrossed by people whose pretensions to medical knowledge are alone authorized by their self-adoption of the doctoral bonnet.

These medical characters may be considered under two classes, the one embracing those individuals who have never left Constantinople, the other those who have spent some time at a foreign university. The education of a portion of the former consists in attending the visits of a physician as Dragoman or interpreter for some years, and thereby acquiring the knowledge of that style of explaining diseases, and reconciling remedies adapted to Turkish pathology; and subsequently, in applying to an apothecary for the phraseology of receipt-making. For this instruction Turkish practice affords particular facility; for whilst the physician has his pipe and coffee, the patient discourses on his ailment and treatment with an inquisitiveness which it requires great ingenuity to satisfy. Others act as druggists for a period, and, when sufficiently known in that capacity, find the transit easy into the other character, preferred solely because more lucrative; whilst a third set, availing themselves of the belief which the Turks entertain of the hereditary nature of scientific and medical abilities exalt themselves on the reputation of a father or uncle, and, despising the other subsidiary arts of advancement, start at once into authority and eminence. Nor is their presumption unrewarded or dishonored. Any of these aiming at particular distinction may obtain, on reasonable terms, from the Hakim Bashi, a form of permission acknowledging their right to practice.

The second class, forming the great majority of those at Constantinople, consists of Greeks who have passed a year or two at the university of Padua or Pisa. This circumstance, which gives a more formal authority to their pretensions, is further used to force their practice by a display of technical terms and uncomprehended doctrines. But as their residence abroad is too limited to insure those acquirements in medicine, which depend more on study and experience than endowments of genius, it is natural to suppose that these students must, for the most part, enter on practice with little less acquired knowledge, and infinitely more dangerous hardihood, than the less favored tribe of Dragomans and druggists; yet it seldom happens that these, by perseverance and the use of certain arts of chicanery, elsewhere reprobated, but which here pass current without opprobrium, fail to gain independence and even reputation.* It would be not less invidious than unprofitable to disclose the minute details of the practice pursued by the one and the other branch of these men. Suffice it to say, that in acute cases the system of Broussais, as prescribing blood-letting, diet and simple remedies, has been happily pretty generally adopted, to the exclusion of drugs, the efficacy

* It would be insulting the good sense of many Greeks of Constantinople, who by a regular course of study, and by their talents and character, have deservedly obtained a well merited distinction, to offer any assurance that this criticism cannot reflect on them.

of which, under the most prudent administration, is doubtful, and which in this climate, in the hands of ignorant adventurers, would be useless; and that in chronic cases patient and doctor are alike satisfied to alleviate urgent symptoms, and trust to circumstances to decide the result. A novel and most despicable feature of this routine should not, however, be unnoticed, namely, the avowed alliances, offensive and defensive, established betwixt bands of these individuals whose twofold object is to support each other's merits and doctrines at their chosen apothecary, and to approve and ratify each other's practice in the presence of the patient at consultation; and secondly, to oppose all collision of science with quackery, by attacking, with the vilest subterfuges, the character and skill of the regular practitioner. Wo to the European who, on his arrival, does not know how to conciliate their favors, or who dares question their pretensions; for so great is their ascendancy over Turks, Armenians, and Greeks, by knowledge of their language and caprices, that these, when they consult a Frank, seldom or never follow his prescription without subsequently having their value determined by the Jew or Greek in ordinary attendance: and therefore it is that the physician must, for a season, condescend to applaud the discernment, and sanction the acts of a person whose knavery would overrule his science. The habit of the natives to ascertain privately the particular opinion of one or more of those in consultation, after the general decision has been given, facilitates, if it does not constitute, this practice, to the advantage of the intrigues of one party, and detriment of honest principles of the other.

The practice of surgery is considered by the people a department of science very distinct from, and inconsistent with, the dignity of the physician; and although able surgeons have by their skill and respectability, distinguished themselves, and been honored by the Turks as general practitioners, yet, until the present day, the prejudice against the custom is such, that few Europeans profess to be Gerats, although, with two or three exceptions, all would operate. Surgery has, therefore, from this imaginary opprobrium, been abandoned to certain adventurers, and has fallen into disrepute. The probable cause of this disparagement may be ascribed to the ignorance of anatomy among native practitioners, and their consequent necessity to appear superior to an art, the dexterity and success of which may be appreciated by the commonest capacity.* Capital operations

* The abandonment of surgery in the capital cannot be better illustrated than by the fact, that a successful case of formation of the nose from the integuments of the forehead has acquired to the writer more fame and applause than the tying the subclavian would have done. The Sultan himself and his ministers sent to express their interest in the case, and had the man subsequently exhibited in full *divan*.

are unknown at Constantinople, partly from this cause, and partly from the few accidents occurring in civil life; and it is a notorious fact, that in the last war there were not five surgeons capable of performing the most common operations on the field of battle attached to the Ottoman army. Particular branches of the art, as bone-setting, hernia, and eye operations, are exercised by Persians and Moreats, with a success and celebrity similar to the like people with us. Midwifery is almost exclusively practised by Jewish and Turkish women; and it is worthy of remark, that the obstetric art forms a very small portion of their adroitness or employment. All pretend to possess, and some have become famous and wealthy by their pretensions, certain means, not only to obviate sterility, but also to produce abortion by administration of drugs,— a practice avowedly tolerated and frequently resorted to by Turkish females, both from their dislike to frequent pregnancy, and from command of their lords, when their harem threatens to become too numerous.

These facts, without further comment, exemplify the degradation of medicine at Constantinople; and the character might, with equal justice, be extended to the empire at large. Our regret and indignation are, however, somewhat assuaged in referring to the conduct and character of several European and Greek medical men here. With equal truth and pleasure we bear testimony to the integrity of those whose principles and talents redeem in some measure the honor of their profession, and recover a portion of that distinction and credit conferred on it in Europe. Without fear of being accused of national prejudices, it may be said, that Englishmen have always enjoyed a flattering station amongst the most distinguished practitioners of the place; and, at the present day, the humanity and skill of my friends, Dr M'Guffog and Dr M'Carthy, are rewarded by the confidence of the higher ranks of the empire, and a reputation amongst every denomination of people, perhaps never surpassed at Constantinople.

From these disagreeable details, sketched with as much leniency as fidelity permits, we turn, with gratification, to the improved prospects of medical instruction offered by the institution lately established at Constantinople.

We have seen the inefficiency of the former means of attaining this object, and its consequent evils; and we are therefore disposed to receive with satisfaction, and judge favorably of the endeavor, with all its defects, to bestow on this department a portion of those ameliorations developed in the scheme of military organization and general instruction planned and prosecuted by the Sultan. The groans and murmurs of the wounded of the last war have touched the sensibility of the divan, and shown the Moslem legislators the great necessity of yielding to the calls of humanity,

and, by this establishment, of remedying the terribly augmented destruction of their troops from absence of surgeons. This medical school, at the expense of Government, was opened three years ago. It is under the direct control of the Hakim Bashi, whose talents and liberality fully qualify him for this important charge; and by whom teachers are appointed, and students selected. It is at present composed of four professors, two for the Arabic and French languages, and two for medicine and surgery, and 140 scholars from fourteen to thirty years of age, divided into these several classes. By an ill-advised economy, the salary of the first is too small to encourage any competition of respectable talents for the appointment; and, where the honor and influence thereto attached is questionable, this circumstance must affect the interests and utility of the seminary. But, on the other hand, the pay, rations, and prospects held out to the students have excited a great eagerness on the part of the better classes of the people to insure their children these advantages.

The first period of this course of education is spent in obtaining a competent knowledge of the Arabic and French languages, the object and utility of which are alike conspicuous. The second is devoted to medicine; but unfortunately the means of imparting or acquiring this knowledge are so imperfect that it is quite impossible for teachers, however talented, zealous not to compromise themselves, or for pupils, whatever their capabilities and application, not to be disappointed by the event. From the limited time of study, the non-appointment of additional lectures has not yet been so severely felt as the want of those means of practical instructions which are indispensable to the acquisition of useful medical knowledge, namely, anatomical demonstrations, chemical experiments, and hospital attendance. The latter defect was most manifest on my first visit to the institution, on witnessing the eagerness of the young men to impress a favorable opinion of their application, and the interest and pride with which they listened to inquiries and remarks on showing their manuels of anatomy, physiology, and materia medica, a new preparation of the blood-vessels of the head, some plates, and a skeleton, as if these, their library and museum, evinced and insured their acquirements, and unfolded the mysteries of medical science.

The lecture attended fully exemplified this. The person was surrounded by students in an oriental posture, with a French epitome of anatomy in their hands, from which he was laboring to explain, by translation and reference to a skeleton, one of the most intricate points of surgical anatomy, that of the shoulder-joint. The result of his utmost exertions was to store the learner's memory with technical words, of the import of which they could form no precise or useful application.

This pitiable abuse of time, industry, and genius, on the part of teacher and scholar, must be speedily redressed in the system of education, or experience will effectually support the malevolent ridicule of those opponents, whose selfish motives desire its failure; for, besides the positive harm done by teaching nothing, its continuance on the same plan must destroy all habit of reflection or reasoning, and implant false comprehensions of the extent and importance of the study.

These faults, into the origin of which it is useless to inquire, but which are in part inseparable from a system of instruction so little understood and appreciated in Turkey, may be alleviated, if not entirely removed, by the simple authority of the head of the institution, without encroaching on the prejudices of the people, or doctrines of the Koran. The only point which has entered into discussion is that of dissections. My attention has been directed to this question by inquiries amongst native practitioners, people of the church, and others capable of knowing; and their uniform answer is, that there exists no law of the prophet, nor decision of his commentators, against anatomical demonstration, and, therefore, that a decree from the Mufti, or order from the Hakim Bashi, would be sufficient to authorize their performance. It is already fully sanctioned by the precedent of the school of medicine near Cairo. My friend Dr Clot, who has done himself distinguished honor by that establishment, had influence to obtain from the Pasha an unqualified order to employ the dead of the military hospital for this object. No moment can be more propitious than the present for establishing the custom, when the marvellous changes affecting the manners and opinions of the people, and acts of the government, hinder too severe examination of particular measures and prepare men's minds for every innovation. It is, moreover, believed that the spirit of the Turkish religion, which is stript of much of its former fanaticism and intolerance, would be easily reconciled to the matter, and would overcome any scruples which the Dervisch or Iman might oppose to this concession.

It must, however, be confessed, that there is no improvement which does not offer difficulties almost insuperable, even proceeding from those for whose benefit such changes would be made; and if the study of anatomy be too much in advance of the progress of general knowledge in Turkey, the only alternative of the government is to adopt the project already contemplated by the Hakim Bashi, namely, to send, at the public cost, a hundred or more clever young men of good families into England and France, where, by intercourse with polished society, they may be emancipated from the stubborn thraldom of native prejudices, and, by a university education, be qualified on their return to become teachers of the various branches of medical education, and

wise and influential promoters of the political scheme of instruction. The most conversant with the character and views of Mahmoud suppose that he may be induced to support this design liberally, from being devoted to the project of enlightening his people, and forwarding them in that career of civilization, in which the rapid progress of his most redoubtable neighbors, contrasted with his own backwardness, has brought so grievous calamities on his empire.

To conclude by reverting to the schools, the establishment, though very imperfect deserves our warmest commendation, since, co-operating with its contemporary in Egypt, it must effect a beneficial change on the Turkish state of medicine. The latter possesses the superior advantages of numerous well-informed instructors, of hospital practice, necroscopic inspections and demonstrations; but must yield to the former in the intelligence, application and capabilities of the students, which qualities, if rightly encouraged, would expand themselves to the honor of the teachers and founders of the school. The experience of its success has convinced the most sceptical of its expediency; and although its immediate confinement to the army be too limited, and its course of instruction hitherto too contracted to afford a speedy marked result, yet its very existence, and the satisfaction given by the pupils, encourage the hope that, under the enlightened care of the Hakim Bashi, a useful system of medical instruction will be established, and diffuse its benefits over countries in which ignorance, superstition, and empiricism have hitherto exercised an unlimited sway.

Cold.

From the Encyclopædia of Practical Medicine.

It is designed under this head to treat of the morbid effects of excessive cold applied to the human body, and of the means of removing them; and also of the application of cold as a remedy in diseases.

The term *cold* is relative, and perhaps, strictly speaking, ought to be restricted to that sensation which is produced in the animal body by the abstraction of caloric from it, in consequence of the application of any solid, fluid, or gas, of a lower temperature than itself. In common language, however, cold is spoken of as a positive agent and by some men of science it has been supposed to have as distinct an existence as caloric, or the matter of heat. The result of some experiments instituted to demonstrate that cold may be radiated in the same way as caloric, appears to have confirmed this opinion in some minds; but the effects produced by those experiments are explicable on the supposition that caloric is radiated, and not an agent of an opposite character.

The sensation of cold is not always produced by the same degree of temperature, for it depends very much on the state of the body previous to its application; indeed, what may be considered a low temperature under some circumstances will cause the sensation of warmth, and a comparatively high temperature will produce that of cold. If the right hand be immersed in water at the temperature of 80° of Fah. and the left in an equal quantity of water at 40°, the former will receive the sensation of heat, and the latter that of cold; but if the two quantities of water be then mixed, and both hands dipped into the mixture at the same time, the feeling of cold will be produced in the right, and the feeling of warmth in the left; so that no fixed temperature can be called either hot or cold. The generation of animal heat, or, in other words, the internal development of caloric, is accomplished by a process continually going on in the body, more actively perhaps at some times than at others.

The abstraction of caloric from the body within given bounds may be regarded as a salutary process; on this circumstance the degree of vigor observable in the frame, in temperate climates, so much greater than in either what are called the torrid or frozen regions, may in no small measure depend; the degree of abstraction being neither so great as to leave the system torpid, nor so slight as to render it oppressed. Instinct and reason have led to attempts to regulate, by various artificial means, this cooling effect of the surrounding atmosphere in cold climates and seasons, as well as by contrivances for cooling the air in hot regions, to protect the system against the effects of excessive heat; and it is a remarkable fact, that a provision in nature seems in some degree to be made to accomplish the same object in the animal kingdom; for in very cold climates wool and hair grow abundantly long and thick on the brutes, so as to protect them against cold, while in the hotter climates their skin is scarcely covered; and the same animal on being removed from a cold to a warm country, or from a warm to a cold one, is found to change the length of coat. Thus dogs taken from England to India will often lose all their hair; and in our own climate the horse is well known to have the length of the hair covering his skin regulated by the clothing in the stable.

Perhaps the temperature of the atmosphere which is most congenial to the human body is a range between 55° and 70° of Fah.; but habit has as much to do with this, as with almost every thing connected with the actions of the animal economy. An extreme degree of heat may be often endured without much inconvenience by those who have been long habituated to it; and the same may be said of cold. But when the system has been making an effort, if the expression may be used, to resist the bad effects of either a very low or high temperature, a great and sud-

den change in the surrounding atmosphere is always productive of inconvenience. This remark refers not to a change of climate only, but to the vicissitudes which may occur in the temperature of the atmosphere in the same climate. Persons who are strong and robust, however, feel less inconvenience from these sudden changes than those who are weakly; hence the importance of regulating the quantity of clothing according to the powers of the system, and especially according to the vigor with which the circulation of the blood is carried on. A very *frequent* exposure to changes of temperature will often enable the body to resist the ill effects of these changes, and affords another instance of the power of habit. The fact just mentioned is illustrated by the good health often enjoyed by those persons who attend large furnaces, glass-blowers, smelters, &c. The wonderful power of the body to accommodate itself to the circumstances under which it is placed, is, in this particular, exemplified in a very striking way. Hence, undoubtedly, have originated the various modes of attempting to harden the system, and thus to prepare it to resist the morbific agency of cold. It is undoubtedly true that such means will often give tone to weakly persons, and prepare them for the vicissitudes of climate: but with such persons much care is requisite that the plan be not carried too hastily into effect. Indeed, it will be found that many cannot by any care be brought to bear it, and in such instances warm clothing must be mainly depended on as a defence from the sedative action of cold.

This leads to the more special consideration of the *morbid effects* produced on the human body by the *undue* degree of the abstraction of heat from it.

Caloric, or heat, as it is commonly termed, acts as a *stimulant* when applied to the animal body, its effects being local or general according to the extent and degree of its application: it increases, like most other stimulants, the action of the heart and blood-vessels; but (as is also the case generally with stimulants) a secondary effect occurs, which consists in a collapse, (or in an action lower than that which is natural,) after the excitement has subsided. Effects exactly the reverse of these take place from the abstraction of caloric, or, to use the common phrase, from the application of cold. Heat is therefore a stimulant, and cold a sedative, although the exact mode in which heat or cold acts on the body will probably never be determined.

The well known immediate effects of a considerable abstraction of heat are—the sensation which is called *cold*, pallor of the skin, from the absence of blood in the capillary vessels; or a reddish blue color especially of the hands, ears, nose, lips, from a delay of blood within the capillaries, so that it becomes venous; — a shrunken state of the skin, and a contraction of it around the small glands which are imbedded in it, and around the hairs,

causing it to become rough, and to resemble the surface of a plucked goose; hence the technical term *cutis anserina.* The same state of the skin of the scalp often causes the hair to rise in some degree from the head, with a feeling of tightness: this is called *horripilatio.* The extremities of the body suffer first, as the fingers, toes, ears, nose, &c., *i. e.* the parts farthest from the heart. The fingers and toes become sensibly smaller, so that rings which fitted before, fall from the fingers, and shoes drop from the feet for which they were not previously too large. The action of the heart becomes diminished in force, and sometimes also in frequency — the latter being most commonly the result of exposure to a very intense degree of cold; and not unfrequently the pulsations, although weak, become more frequent than natural. These symptoms, which may be considered the moderate effects of cold, will vary greatly as to their degree in different persons exposed to the same low temperature: indeed, to some persons the abstraction of heat by the cold air of a frosty day affords a grateful feeling, and to such it may be really salutary: this will be referred to when speaking of the therapeutical effects of cold. In all persons, however, a very *intense* degree of cold will produce unpleasant sedative effects; and in those who have been previously debilitated, the powers of the system are depressed to an alarming, and even sometimes to a fatal extent: indeed there are very few individuals who have such vigor as to be enabled to resist the consequences of exposure, without sufficient clothing, to the severity of the winter months in the frozen regions, or to the intense cold which is met with in passing over very high mountains. The vascular system is not alone affected by the agency of cold on the body, as is proved by the symptoms which occur in the more severe cases of exposure; the brain and nervous system generally being soon brought under its influence. Perhaps it may be with propriety supposed that the nervous system primarily receives every impression from external agents, and that cold, therefore, first acts on this system, the vascular system being only secondarily affected: this question need not be here discussed.

Numbness, or a want of the ordinary acuteness in the sense of touch, is a consequence of exposure to cold; this numbness is experienced by most persons in their fingers and toes on a very cold day, or after having been long immersed in cold water. It is worthy of remark here, that in these individuals there appears to be something very peculiar as it respects the action of cold on their extremities; the blood appears to cease to flow altogether into the vessels of the fingers and toes, which look exactly (as the common expression implies) like those of a dead person; and so torpid do they become under these circumstances, that a pin can scarcely be felt when placed between the ends of two of the fingers, and the motions of the hand are regulated, not by the

touch, as is usual, but entirely by the sight. This singular idiosyncrasy has never received a satisfactory explanation : it does not appear to arise from debility of the vascular system alone, for it is found in some who have no sign of such debility : probably it may depend, as all idosyncrasies appear to do, on an original peculiarity of structure : it is found to prevail in individuals of the same family. The very great diminution (almost suspension) of sensibility in such cases may arise in some measure from a want of the necessary supply of blood to the extremities of the nerves ; as it is an undoubted fact that their sensibility is greatly regulated in its degree by the quantity of blood circulating through the capillaries. It may also in part depend on the direct effect of the cold on the nerves themselves ; but this action on the nerves is not the only cause of the torpor is rendered probable, if not proved, by the fact, that if artificial warmth be applied so as to bring the fingers to their natural temperature, the sensibility will not return until the circulation is restored.

The whole surface of the body becomes less sensible to the touch under the influence of a great degree of cold ; and the sense of taste is sometimes blunted. But further, when a still greater effect is produced, the brain loses its energy, and an irresistible desire to sleep ensues. Here we may again observe that it is hardly possible to determine whether this is the direct result of the action of the cold as a sedative on the brain, or whether it depends on a want of the due supply of blood to that organ on account of the diminished action of the heart. When this overpowering tendency to sleep has commenced, much danger is to be apprehended ; for it has generally been found, when indulged, to be the precursor of death. The interesting account given by Captain Cook of the excursion of Dr Solander and Sir Joseph Banks, with nine other individuals, over the hills of Terra del Fuego, affords a very strong illustration of this effect of cold. Dr Solander, who had witnessed the torpor and death produced by severe cold while crossing over some of the mountainous districts of the north of Europe, thought it necessary to put his companions on their guard, and requested them to resist determinately the strong tendency to sleep which he expected some of them would feel; his words, quoted by Captain Cook, were, " Whoever sits down will sleep, and whoever sleeps will wake no more." The doctor was the first who began to experience the anticipated effect of the cold ; and so irresistible was the inclination to sleep, even in him, that in spite of his judgment and fears he intreated his companions to allow him to lie down : they acted upon the knowledge he had afforded them for their own safety, and partly by entreaty and partly by force kept him for some time from indulging his destructive inclination ; but at last, becoming themselves almost exhausted, they were obliged to leave him behind,

together with two black servants who had also become drowsy. Dr Solander was, however, roused, although with the greatest difficulty, after having slept about five minutes only, and carried to a fire which some of the party had succeeded in kindling, and and thus narrowly escaped death, although for a time he almost lost the power of his limbs. The two poor blacks perished.

Many examples of this extreme effect of cold will be found on record in the writings of travellers and historians: the same effect is produced, to a certain extent, in this country in very severe winters. The celebrated traveller Dr Edward Daniel Clarke, the late eloquent Professor of Mineralogy in the University of Cambridge, was on one occasion near losing his life by cold. Having performed divine service at a church near Cambridge in the afternoon of a very severely cold snowy Sunday, in the year 1818 or 1819, he mounted his horse for the purpose of returning home. Soon finding himself becoming very cold and sleepy, and knowing well the danger of giving way to sleep, he put the horse into a fast trot, hoping by that means to arouse himself from the alarming torpor which was coming over him: this means was unavailing; and then fearing that he should soon fall from his seat, he dismounted, and determining to use every effort to resist sleep, put the bridle under his arm and walked as rapidly as he could. This, however, did not long succeed: the bridle dropped from his arm, his legs began to falter, and he was just sinking down upon the snow, to rise probably, no more, when a gentleman who knew him came up to him in a gig, and rescued him from his perilous situation. This account was given to the writer of this article by Dr Clarke himself the succeeding morning; he then felt languid and feverish, after having had a good deal of reaction during the night, but the effect soon passed off entirely.

The action of cold is probably, as has been already remarked, greater on those persons who have naturally a weak circulation, or who have become weak from any debilitating cause; and this last is the reason why those are very soon affected by it who have undergone much fatigue. A moist state of the skin from perspiration or damp clothing will also accelerate the effect of cold, by superadding to the direct effect of the cold air the further abstraction of caloric by evaporation. It is a curious but well established fact, that when the mind is deeply engaged, the body is less affected by cold; and it is perhaps on this account that maniacs will often bear exposure to extreme cold without complaining.

When the body is warm, and the circulation vigorous, provided there be no perspiration on the skin, the bad effects of exposure to cold are less likely to be experienced. The common practice, therefore, of persons cooling themselves gradually before they pass from a warm room into the open air has originated in error:

the greatest protection from the bad consequences of such a change is found in a vigorous circulation, a warm dry skin, and thick clothing.

Long continued immersion of the body in cold water seems to be productive of nearly the same symptoms as those which arise from exposure to a very cold atmosphere. It has been asserted, on the ground of recorded facts, that less danger is likely to ensue from immersion in sea-water than in fresh water; and it has been alleged that this minor degree of effect is referrible to the stimulating quality afforded to the sea-water by the salts which are dissolved by it. This solution of the facts is probably in part correct; but it must be remembered that the water of the sea is rarely so cold in winter as that of rivers, the immense mass of the ocean requiring a much longer period than that of a winter to cool it down to the lower degrees of temperature of the winter atmosphere: there must besides, by means of the tides, be a continual admixture of the warm water from the southern seas with the colder water of the northern. A doubt, however, cannot be entertained of the advantage which persons who are exposed to the misfortune of shipwreck during severe cold will derive from keeping themselves immersed in the sea-water; and not only because the water is warmer than the atmosphere, but also because it will prevent the effects of evaporation. Many interesting accounts of shipwrecks have been published which show that this is not mere theory.

The complete and speedy destruction of life from exposure to intense cold may result from the general sedative effect which has been already described; but when life is not totally lost, the extremities may lose their vitality, and mortification to a greater or less extent ensue. Limbs are frequently in this way mutilated in cold seasons in northern latitudes, and in very high situations; when the surface of the nose and the ears suffer in this way, and are said to be frost-nipped or frost-bitten.

But the injury sustained from exposure to cold is not always dependent on its direct sedative action, for it may produce disease, and even cause death, by that secondary effect which is denominated *reaction*. This reaction after depression consists in the return of the action of the vascular system; if moderate, it may go little beyond the natural degree: the pulse becomes rather more frequent and full, and the heat of the surface greater than natural, and a glow is experienced over the whole body: this soon passes off, and leaves no evil consequences. But when the reaction is great, the vascular excitement is so increased beyond its due bounds as to constitute *fever;* and perhaps there may be in reality no difference between this state of the body and fever from other causes. The symptoms are often the same, and sometimes last as long; but the feverish state in a day or

two will give way, in many cases, on using very mild remedies, or even without any remedies at all : such cases are called *ephemeral* fever.

Fever is not the only consequence to be feared from reaction after exposure to cold ; local inflammations may follow this general reaction, and any of the internal membranes or organs may become the seat of the inflammation ; but the particular organ affected in each case may be determined by some local predisposition : thus one person will have catarrh, another cynanche tonsillaris, a third pneumonia, as a consequence of exposure to cold.

It appears, from what has been said, that it is to the excess of the reaction that such effects, both local and general, are to be attributed ; and hence the importance of guarding against every circumstance which may have a tendency to stimulate the system immoderately after exposure to cold, and of employing measures calculated to subdue the action of the heart and blood vessels when there is a threatening of sanguineous excitement. The danger of applying heat too rapidly is now generally known, as well as that of administering internally any strong stimulants. A person who has become seriously affected by cold should be placed in warm air about 65° or 70°, and should be well covered over with flannel to prevent the heat, as it becomes generated in the body, from passing off. Friction of the surface by means of the warm hand of two or three attendants, or with warm flannels, may be employed : in extreme cases the body may be wrapped in hot blankets until reaction commences ; large hot poultices or fomentations may be applied with advantage to the abdomen ; the warm air, vapor, or water bath, about the temperature of 98°, may be employed in those instances where the vital spark appears almost extinguished. The means already recommended must be combined with the employment of internal stimulants, alcohol, spices, ammonia, &c : but it must be borne in mind that it is desirable to avoid the employment of internal stimulants to any great extent ; indeed to avoid them altogether if possible, as, after reaction has commenced, they, by their action on the system, may cause the injurious consequences of excessive excitement. If asphyxia (or a suspension of the action of the heart and lungs) succeed to the application of cold, artificial respiration, and the other means recommended in the treatment of asphyxia, may be required. When the heat and action of the system begin to return, care is especially necessary lest the excitement rise to an immoderate degree. The same principle must be our guide in attempting to prevent injurious consequences after the local effects of cold. Chilblains, which are a common consequence of the local application of cold, may be prevented by warming the parts affected very gradually, and by cooling them, as soon as reaction takes place, to the extent of producing the sensation called the *hot-ach*.

Large draughts of cold fluids, taken when the body is fatigued and perspiring, are often productive of serious, or even fatal consequences: the effects are a faltering of the pulse, laborious breathing, dimness of sight, giddiness, and then general torpor and death. The proper mode of treating these cases has never been well pointed out; it appears, however, a rational practice to give, as soon as possible, some warm fluid, to apply hot fomentations or poultices to the epigastrium, and to resort to the means indicated by the principles already laid down.

The abstraction of caloric from the body may and is frequently made to conduce to the recovery of persons laboring under disease.

As a therapeutical agent, cold is employed to accomplish one of the three following purposes: — 1st, to depress inordinate action of the vascular system; 2d, to relax the muscles; 3d, to give vigor to the body.

The sedative effect produced by cold has been already sufficiently dwelt upon to show how it may be employed beneficially to subdue high vascular action. In inflammation, therefore, and in fevers, cold may very often be considered as one of our most valuable remedies. It may be supposed by some persons, that the beneficial effect resulting from the employment of cold in inflammation and fever arises from the simple diminution of the heat: indeed it is most probable that it was on account of the augmented heat in those diseases that it was at first resorted to; but our present improved pathological views enable us to form a more correct judgment of the action of remedies; and there cannot now exist a doubt that the advantage arising from the use of cold in fever and inflammation is to be ascribed to its allaying vascular action.

When inflammation is situated in the external parts of the trunk of the body, or in the extremities, one of the means most commonly employed to subdue it is the application of an evaporating lotion. The lotion may be used cold, and then the heat is in some degree abstracted directly by the cold fluid; but the principal advantage (unless the lotion is constantly applied) is derived from the evaporation of the fluid. It is not, therefore, absolutely necessary that the lotion should be colder than the body of the patient, as evaporation will take place more speedily when it is tepid; and in some cases it is preferable to use it warm, on account of its being more agreeable to the feelings of the patient.

Although there cannot be a doubt entertained of the advantage of employing cold applications in cases of common inflammation of the surface and of the extremities of the body, yet by many it is held to be problematical whether they are properly employed in cases of internal inflammations, as of the membranes

and organs included within the skull, the thorax, and the abdomen; as by such means the blood may be so thrown upon the internal parts as to aggravate the inflammation. As it respects the brain and its membranes, this reasoning, although at first sight plausible, is evidently fallacious. The object in cases of inflammation being to lessen the flow of blood to the part affected, any means which will control the action of the carotid arteries must be useful in inflammation within the head, as it is by those arteries that the greater part of the blood is conveyed thither. Cold applied to the scalp will be found to act as a sedative, not only upon the vessels of the integuments, but (by a sympathy which is well known to exist between the larger and the smaller vessels) upon the carotids also. It must be clear, therefore, even from theory, that cold applied to the integuments of the head will be of service in inflammatory diseases of the brain; but experience has long decided the point, and no practitioner omits this powerful remedy when he has to combat with such affections.

The immediate effect produced by a sudden dash of cold water, or by a stream of the same poured upon the face and head, is found useful in many states of the brain. This mode of using the remedy is sometimes adopted with advantage in phrenitis, in hysteria, in syncope, and in cases where narcotic poisons have been taken in large quantities, especially opium. The advantage may be owing in some degree, as in inflammation, to the sedative effect of the cold upon the blood vessels; but this cannot account for the benefit produced in syncope, and the sudden impression made on the nerves by the cold must be also taken into the account.

It seems to remain doubtful whether or not cold may with advantage, or even with safety, be applied to the chest or abdomen when there exists inflammation of the membranes or viscera within those cavities. This practice has, however, of late been recommended by some physicians whose opinions ought to have weight, and especially so as the recommendation seems to be grounded on the result of experience: the limits of this article will not allow of a full examination of this interesting subject; the author, however, may be allowed to say that in some cases of phthisis pulmonalis, where the pleura has become inflamed, an evaporating lotion, applied over the part in pain, has often appeared to be of considerable service.

Cold applied to the body has become a very common remedy in fever, when the system is in a state of very high excitement; and it is undoubtedly a remedy of almost unequalled efficacy in such cases. It may be employed by means of cold fluids received into the stomach, or by means of water or air applied to the surface. From the time of Hippocrates the powerful effects of cold have been appreciated in controlling febrile action; and it has from that period to the present time been occasionally lauded as an

important therapeutical agent: but it was not until of late years that its applicability in cases of fever became fully understood. We are more especially indebted to the late Dr Currie of Liverpool for our knowledge of the value of this refrigerant, and of the mode of employing it;* although very valuable information may be found scattered through other medical works. It is not in all cases of fever that the remedy can be employed with advantage, or even with safety: it is only calculated to subdue excessive action when that action is accompanied by a temperature of the body above 98°: even among such cases there may be a few in which some other peculiarity may forbid its use, — for example, when the skin is moist. At least, if it be employed under such circumstances, it will require the greatest caution, even although the temperature of the body be high, which however, is very unusual when the skin perspires. In measles, cold is in no case to be applied to the skin, nor are cold fluids to be drunk. Nevertheless, in scarlet fever cold is of the greatest service in moderating the action of the system. It is probable, although not clearly proved, that where fever is accompanied by some visceral disease, this remedy may act injuriously, by determining a large quantity of blood to the internal parts of the body.

The circumstances which, when combined, may justify the employment of cold as a sedative in common fever, are, an increase of the animal heat above 98° of Fahrenheit, a uniform increase of temperature over the *whole* body, and a dry state of the skin over the whole surface. If there be a tendency to perspiration, it will shew itself first in a damp state of the palms of the hands, or of the axillæ. Should a sense of chilliness be felt by the patient, that also will render the employment of cold of doubtful propriety.

Several different modes of bringing the body under the influence of cold are resorted to by medical men.

First, immersion of the body in a cold or tepid bath.

Secondly, affusion of cold or tepid water over the body.

Thirdly, sponging the body with a cold or tepid fluid.

In some few cases, and in a very early stage of reaction, fever has been arrested in its progress by the cold bath or by cold affusion; but where fever is fairly established, it can rarely be suddenly put a stop to by these or by any other means: we can then only mitigate the severity of the symptoms, and thus give a better chance of the occurrence of a favorable crisis. But the practice of immersing the patient in a bath, or throwing water over the body, has of late been very rarely adopted; and its disuse has not been without reason, for considerable inconvenience both to the patients and to the attendants is given, especially in private prac-

* On the Effects of Water, &c. in Fever. Lond. 1805.

tice, by the employment of both these modes. But the principal objection to them arises from the impossibility of determining the precise extent to which we ought to carry the sedative effects of cold, while the body is immersed in the water, or while it is passing over it in the way of affusion. The patient may be kept too long or too short a time in the bath, or too little or too much water may be affused; so that the action of the system may be too much depressed, or not sufficiently overcome. These objections cannot be made to sponging the surface of the body with cold water: by this means the cooling process can be carried to the exact extent which is required; the criterion for judging of the effect being the feelings of the patient — a slight chilliness will mark the time to desist. Two or three attendants should be employed at the same time, with large wet sponges, passing them over the different parts of the naked body in succession, until the chill comes over the patient, who is then to be placed in a dry bed and moderately covered.

The temperature of the water when used with the sponges may not be a matter of much moment, as it is by means of the evaporation that the heat is principally abstracted from the body: tepid water (from 70 to 90°) will in general be found most agreeable to the feelings of the patient, and it will be equally, if not more speedily efficacious in reducing the morbid heat. It seems also probable, for reasons already assigned, that reaction will not so quickly occur after tepid as after cold sponging. When the desired affect is produced by this mode of refrigeration, the pulse becomes softer and slower, the skin cool and perspirable; headache, if before existing, is relieved, and frequently delirium is suspended, and the general feelings of the patient are so improved that sleep will follow. The remedy will, however, generally require repetition to derive from it its full advantage, and this should be as soon as reaction takes place to any extent; indeed the sponges may be used partially or generally many times in the day and night; but should the pulse rise very speedily, and the heat return very soon after it has been reduced by this remedy, other means must be combined with it, as bleeding, purging, &c: but in by far the majority of cases of fever, dependence may be placed on refrigeration alone to keep down inordinate action. Vinegar, spirit, ether, &c, are sometimes used to increase the evaporation, but these are seldom required.

Cold air admitted into the patient's room, or a current of air passing over his body, will often tend to allay vascular excitement: hence poor patients, in fever, who have been lying in their own confined apartments, are often speedily benefited by removal to a hospital through the open air. It is very questionable if any medicine admitted into the stomach is worthy, strictly speaking, to be called a refrigerant, at least to be called so on account

of any quality which it possesses, excepting its low degree of temperature, although many articles of the Materia Medica are reputed to have this effect.

When hemorrhage occurs from increased action of the circulation, or is accompanied by such increased action, it may very frequently be restrained by the sedative effect of cold. The local application of cold to the bleeding vessels, or cold so applied as to act upon the large vessels which supply those which are bleeding, will be often found of very great service; for example, in hemorrhage from the nose, (epistaxis,) cold water used to the face and head will often of itself stop the flow of blood; but in cases of bleeding from the internal organs, cold, made to act upon the system generally, will often be found of great use in helping to restrain the action of the heart. A patient laboring under hemorrhage from the lungs, (hæmoptysis,) may with great advantage be kept uncomfortably cold: of course when the hemorrhage is not active, but of the passive character, injury rather than benefit might result from the employment of this means.

The depressing effect of cold upon the energies of the animal body is remarkably exemplified in the debility which is felt in the muscles of a person who has been long exposed to a very low temperature; indeed it is very probable that the sedative action of cold on the circulating system is to be ascribed to a diminution of the irritability of the muscular fibres of the heart and blood vessels. When, therefore, an inordinate contraction of the muscles occurs, as in spasmodic diseases, the sedative quality of cold may cause them to relax when that remedy is applied to the body to a great extent. The cold bath and cold affusion have for this purpose been frequently employed in tetanus; the relaxation, however, which often occurs immediately after the application, is generally of very short duration; and it ought to be remarked that the sudden shock experienced on the first impression of the cold water will often excite an exacerbation of the spasm, and that immediate death has ensued in a few instances. This mode of treating the disease is certainly, in general, far from being effectual; and it cannot be deemed altogether a safe one. The sedative effect of cold on the muscles has been said to show itself in alleviating the irregular actions in chorea, hysteria, and other convulsive diseases: in these cases the cold bath or shower bath has been recommended. As an instance of the effect of cold in producing muscular relaxation, it may be stated that surgeons are sometimes able to reduce, with great ease, a dislocated limb during the temporary debility which is induced in the muscles after long immersion in a cold bath. There are, however, other remedies capable of producing relaxation of the muscles, which must be considered much more certain than cold.

The last therapeutical agency of cold which remains to be considered, is its invigorating quality when employed in cases of debility, or, in other words, its *tonic* property.

It has already been remarked that the direct effect of a moderately cold atmosphere is grateful and refreshing to the feelings of some persons: those who have naturally a very vigorous and too rapid a circulation, those who suffer from the production of too much animal heat, and those who are liable in warm weather to have an inordinate secretion from the skin, are generally benefited by the cold season of winter: by such persons, from their feelings, a cold frosty day will be called bracing and invigorating. To those individuals, however, who have a languid circulation, either naturally or as the effect of disease, cold weather is far from being either agreeable or beneficial. It has been found on inquiry that a severe winter is in this country, and especially in the metropolis, productive of more disease than a milder season; the old and the infirm being the chief sufferers.*

An especial reference must here be made to the beneficial effects of that moderate degree of the reaction in weakly persons which follows the application of cold to the surface. The glow which pervades the body, arising from the increase of the circulation, is often at the moment accompanied by a sensible increase of vigor and activity. The benefit appears to depend very much on the blood being thrown in greater quantity into the capillary vessels, and on a consequent increase of their action in preserving the well-being of every part of the system. Cold therefore, in this respect, seems to act indirectly as one of the diffusible stimulants.

Some kinds of diseases of the skin are benefited by cold or tepid bathing. When there is much inflammatory action of the cuticular vessels, it is desirable to avoid reaction, and this is best accomplished by the use of tepid water, (about 70°,) keeping the body a long time immersed, and afterwards preventing the skin from getting hot: in other cases, where an eruption seems to depend on a torpor of the cuticular vessels, it is desirable to favor the occurrence of reaction.

On the whole, the action of cold on the human body may be regarded as very important in a therapeutical point of view; it requires, however, as all remedies do, much judicious management; but with such management it is every day made the means of alleviating sufferings and of prolonging life.

* *Bateman*, On the Diseases of London.

Hints to a Young Physician.

The following paragraphs are extracted from an English Periodical, and manifest in their author, not only a nice sense of the το πρεπον in medical deportment but a sagacious observation, and just appreciation of the arts and contrivances by which many young physicians, and some old ones too seek, and secure an ill-gotten advancement, at the expense of true dignity and to the scandal of science.

Although prepared originally for the meridian of London, many of the "Hints" require but little rectification to be applied to good purpose here. E.

1. The great tests of medical ability are solemnity of mien and mysteriousness of manner. Gravity is to the face of a physician what platina is to the baser metal — a cheap covering, which gives currency to things of small value. Therefore seldom smile, or if you do, let it be after the fashion of Cassius; dulness is pardonable, but mirth is a misprision of light behaviour.

2. The coat and not the college makes the Doctor; a customary suit of solemn black is indispensable to an M. D.; leave brown coats and buff waistcoats to apothecaries. No coat is so fatal to a physician as a blue, except an old one which was once black.

3. When you have taken a house and put a brass plate on the door, you cannot do better than travel for seven years. At your return, you will probably find that no one has inquired for you, which must be consolatory to your feelings, inasmuch as it will show you that you have lost nothing by your absence.

4. Having familiarized people with your name, it behooves you then to give it notoriety; therefore lose no time in getting into print. You cannot lay out your money to better advantage than publishing a pamphlet on any popular subject.

5. The great majority of mankind are fools — by 'that large portion you are to live; therefore mystify your patients. When you talk to them, let it be in King Cambyses' vein. The ears of the million are easily captivated, and they have naturally a religious veneration for anything they do not understand.

6. Never give a direct answer to a patient's question, or commit yourself by entering into an explanation with his friends. To the sick man you cannot put too few questions; to the relatives you can never give too few replies.

7. Beware of that folly of young physicians, the disposition to give an unfavorable prognosis; an unlucky shake of the head has frightened many a patient to death, and the declaration of danger has lost many a practitioner the confidence of the family.

It becomes the doctor to talk of the perils of the case only when the patient has recovered.

8. The great art of a physician is to gain the confidence of his patient; and for that purpose his first effort should be to inspire him with hope. It is not a hesitating manner or a melancholy mein that is calculated to raise the drooping spirits of the sick. To work miracles in chronic maladies, it is only needful that the patient should have faith in his physician. Half the maladies incident to humanity arise from the diminution of nervous energy, and any violent exercise of the faculties of volition is attended by at least a temporary increase of that impaired power, a sudden renovation of the *medicatrix naturæ*.

9. Never refuse a fee from any person who is able to give one, in order that you may never have occasion to take one from a man who is too poor to pay it. It matters not how mercenary you are accounted by the rich, so long as you are merciful to the poor.

10. Every physician is expected to be a gentleman, and every gentleman is expected to be a christian; the evidence of his being so is easily published by a regular attendance at some fashionable church. The device of being called out in the midst of the service, has unfortunately become too stale; but still you may carry a world of care and occupation upon your brow, and, by a thousand little delicate deceptions, "assume a practice when you have it not."

11. Avoid the society of your patients. — Physicians should have no familiars; to be thoroughly respected, they must stand aloof from the gaze of society. A prophet hath no honor in his own country, neither has a physician in his own circle.

12. Without skill it is impossible to become a flourishing physician, but without good manners, all the knowledge of all the Harveys, Hunters and Heberdens will not avail you in a large capital. A good address is every thing to a doctor. If his manners be pleasing, the public will give his mind the credit; if he talk sensibly on any ordinary topic, it is an argument with them that he cannot be deficient in what concerns his profession; the question of his skill is possibly decided by his mode of entering an apartment, and one who cannot cut a figure in the drawing-room is accounted an unlikely man to shine in a sick chamber. In a word, suavity is the first cardinal virtue of a physician. Abernethy, it is true, was an uncouth man, and yet flourished; but he was an exception — nature intended him not for society — accident threw him into it; and having devoted his ferocious energies to physic, he became a skilful savage — but it would be folly to affect his savageness.

13. Blessed is the physician who expects the least gratitude from the sick when they become sound, and wise is he who is prepared for a career of interminable annoyances, and brave, who endures them at all times like a philosopher, and patiently

puts up with the capriciousness of the sick, the officiousness of strangers, the kindness of friends, the cross purposes of attendants, the jealousy of apothecaries, and the unreasonableness of all.

14. Lastly, (and this is the grand precept of all) never violate in thought, word, or deed, the sanctity of the sick chamber. He is a villain who reveals the secrets of that prison house where poor humanity lies bare and helpless; he is a traitor to his profession who gossips about the infirmities he is called to relieve; he is unworthy the name of a physician who abuses the confidence that is reposed in his humanity and his honor. Such bold bad men are rare in the profession, but they have existed — avoid them as you would the pestilence.

Madame de Barry's Bequest of her Body.

It is but a short time since that one of our highest literary characters terminated a long career, devoted to the spread of useful knowledge, and the propagation of liberal principles, by directing that his body should be dissected after death; thus contributing at the same time to the interests of science, and still more by his example, to the extinction of a strong national prejudice. The example thus set by Bentham has just been followed by a French lady. The name of Madame de Barry will be long remembered and respected by all who can duly appreciate her self-devotion, or who can admire the spirit which, rejecting popular prejudice and early impressions, loved to be useful even in death. We have been favored with a few particulars connected with the disposal of this lady's body, by a gentleman who assisted at the dissection, and think them not unworthy of public attention.

About the month of April last, Dr Macartney, Professor of Anatomy and Surgery in the University of Dublin, received a communication from Madame de Barry, the substance of which was, that she wished to bequeath her body to him for anatomical examination. The worthy Professor, ever ready to act as high priest on occasions like the present, waited on the lady, and, as we understand, drew up a testamental instrument in such a form, that the body must be delivered to the Professor of Anatomy, or the property of the deceased would pass from the hands of her surviving relatives. On the death of Madame de Barry, this codicil was found fully to answer the purpose intended; for although five or six different wills were discovered, the eccentric, but high-minded woman, had carefully apppended the clause of appropriation to each of them, directing therein that her body should be carried to the anatomical theatre by four poor men, to whom she bequeathed ten shillings each; that it should be dissected by the Professor of Anatomy, and that her skeleton should be prepared and preserved in the Anatomical Museum.

We understand that her skeleton is now being prepared, and that Dr Macartney proposes to place her heart in an urn beside that of Dr O'Connor, who has disposed of his body in a similar manner.

This, we believe, is the first example of a woman having bequeathed her body for anatomical examination.—*Lancet.*

Flooding from Irritation of the Rectum.

I am induced to append to the foregoing cases one of a different nature, but likewise somewhat interesting in its details.

Mrs Captain ——, aged 32. This lady became pregnant in May, 1831, and in the beginning of the following July, after some exertion, was seized with regular labor pains. Flooding took place to a considerable extent, but the practitioner who attended her declared that abortion had not taken place. The discharge of blood, however, still continued in a diminished quantity, although the recumbent position had been strictly adhered to. When she came under my care, the patient's strength was very much reduced, the discharge still continued copious, and the fingers could easily be introduced into the os uteri.

In this case there was much obscurity. The surgeon who had attended the lady in Gosport had given no written statement, and all that could be learned of its previous history was from the imperfect accounts of the patient and her husband. Dr James Johnstone, surgeon of the 23d regiment of Bengal Native Infantry, attended the case along with me, and at first we were both inclined to believe, that expulsion of the fœtus had taken place, with retention of the placenta; still, however, as the previous medical attendant had positively declared that no miscarriage had taken place, we deemed it prudent to follow his opinion for a time, until we could more decidedly come to one of our own. Accordingly, rest was enjoined; a plug, wet with an astringent injection, was introduced into the vagina; opening medicines were given, and small doses of the sulphate of quinine to support the strength.

This treatment was continued for ten days without any improvement. The strength had declined, and the discharge, if any thing had increased. The os uteri was lax and open. An injection was given, which removed a large quantity of hardened fæces from the rectum. This afforded almost immediate relief, and it was determined to repeat the enema every second day. Under this treatment the discharge every day became sensibly less, and in twelve days had entirely ceased.

In this case the discharge was without doubt maintained by the irritation of the hardened fæces in the rectum, and strikingly manifests the sympathy which exists between it and the uterus.

Glasgow, August 25th, 1832. *Lancet.*

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I.—COMBE ON THE CONSTITUTION OF MAN.

[Concluded from our last.]

ARE we asked, as we sometimes have been, how we know the constitution of man to be such as Phrenology represents it? We reply, by the same process, which leads us to the knowledge of the constitution of other things; observation and analysis. Is it our wish to become thoroughly acquainted with a mineral substance? We separate it, by analysis, into its constituent parts, and that informs us. By a similar process, we learn the composition of the atmosphere, of vegetable and animal bodies, and of every other description of matter, susceptible of the influence of chemical agents.

Of the human constitution the same is true. It is as susceptible of analysis as mineral waters, or atmospherical air, although not by the same means. We analyze it, in a twofold way; by observing the characters and actions of other persons; and by examining ourselves. And, the process teaches us, that it is resolvable into the thirtyfour faculties, contained in our author's table, as its component parts. We invite the reader to a strict self-examination, putting to himself, in the course of it, the following questions; and to register the answers, which his consciousness shall suggest. Do I feel that I possess the passions of love *(amativeness,)* friendship *(adhesiveness)* resentment *(combativeness,)* hatred *(destructiveness,)* and an attachment to property *(acquisitiveness)*? and are they all

specifically different from each other? Do I also possess the sentiments of self-esteem, love of approbation, benevolence, veneration, hope, and conscientiousness? and are they, in like manner, different from each other? Do I further possess the faculties of form, color, size, and weight, and also those of individuality, comparison, and causality? and are they also marked by specific differences? — Let him thus interrogate himself, respecting his possession of each of the thirtyfour phrenological faculties, and he will find the answers to be, in every case, affirmative and prompt. In no instance will the question be met by negation or doubt. Let him then compare himself with other men, and he will find, by carefully observing all their manifestations, that their constitutions are compounded like his own. Hence they must possess the same faculties.

Shall we be told that consciousness is an incompetent witness on this subject; and that therefore self-examination is not to be relied on for information, as to the number and character of our mental faculties? We reply, that, although it is not alone depended on, in Phrenology, it is, notwithstanding, a valuable auxiliary, in the procurement of the knowledge required, and ought not to be neglected by those, who wish to become acquainted with man as he is.

There is yet another mode, in which the human constitution may be analysed. Nor does it appear to us to be, in any way, exceptionable. It is founded on a belief in the perfection of the Universe. To doubt man's entire adaptation to his situation and condition on earth, would be disrespectful to Him who placed him here. We believe that no enlightened and unprejudiced individual does doubt it. But such adaptation presupposes a peculiar combination of mental endowments. Any, and every kind and union of these attributes would not constitute it. On the contrary, every combination but one, would mar it, and unfit man for the station he holds; and that is the combination which Phrenology discloses. Let the experiment be made, and the issue noted. Deprive man of any one or more of the thirtyfour faculties, comprised in our author's table, and you throw him completely out of harmony with his place. You unfit him for the full enjoyment of existence, as well as for the discharge of his duties in creation. Is it amativeness you would remove? The human race will become extinct. Is it philoprogenitiveness? The issue will be the same. Infants will necessarily perish, through neglect. Adhesiveness? Life will lose much of its attractiveness, and society will be dissolved, adhesiveness being the chief bond of

the social union. Combativeness and destructiveness? Man will want energy of character and action, and will fall a victim to inferior beings. Is he deprived of self-esteem and love of approbation? His sense of dignity and desire to excel are extinguished. Take from him either ideality, benevolence, veneration, or conscientiousness, and you impair his fitness for his station. Remove them all, and you brutalize him. He will have no more of moral or religious feeling, than the animals beneath him. As respects the loss of his intellectual faculties, the same is true. Deprive him of any of them, and he will be a dislocated being. Without form, size, weight, individuality, color, locality, and the other knowing faculties, he can have no acquaintance with objects and their properties, and will consequently be ignorant of an external world. Nor, without the reflecting faculties, will he be capable of abstraction, or have any knowledge of the higher relations. He will be as destitute of reason and sound judgment, as his own statue in bronze or marble. From these considerations and many other similar ones, which might be added, we deem the composition of the human constitution, maintained in Phrenology, correct.

Section VI. of the volume we are examining, treats of the "sources of human happiness, and the conditions requisite for maintaining it." In this part of his work, our author does not, as too many of his predecessors have done, deal in hypotheses, or any sort of Utopian fancies. His views are sound, clear, and practical. The humblest capacity can comprehend them, and any one can adopt them, as rules of conduct. They are legitimate inferences from the preceding analysis of the constitution of man.

Happiness is pleasurable existence; true pleasure arises from well regulated natural excitement; and excitement and action are virtually the same. Human happiness, then, consists essentially in action. In more explicit terms, it consists in the well apportioned, and well directed exercise of all the faculties, corporeal and mental, that belong to man. Inaction of any part of the body, if not productive of pain, is at least accompanied, for the time, by a negation of all enjoyment depending on that part. Remove light and action from the eye, and the pleasures of vision are withheld. Reduce the ear to a state of inactivity, and the enjoyment of every description of sound is withdrawn. The individual is virtually deaf. Of the other external senses the same is true. Want of action and want of enjoyment in them are identical. Similar observations

are alike applicable to the muscles and joints. The due exercise of them is pleasurable, and a want of exercise in them is a want of pleasure. Of the organs of the brain the same may be affirmed. The natural and regulated excitement of each one of them imparts pleasure, in proportion to its influence; and the entire sum of mental pleasure arises from such excitement of the whole of them. A few examples will illustrate our meaning, and confirm our position.

The organs of the domestic affections are amativeness, philoprogenitiveness, and adhesiveness. And the appropriate action of these constitutes domestic happiness. The pleasure which the mechanician experiences, in pursuing his calling, is great; and it arises from the exercise of constructiveness and form. Acquisitiveness is exercised in the pursuit of wealth; and the occupation is pleasurable.

The organ of benevolence is exercised in doing kind actions; and the concomitant delight arises from that source. The fascinations of beauty of every description, are owing to the excitement of the organ of ideality. The exercise of conscientiousness is the cause of the gratification produced, by the awarding of justice, and the doing of what is right. The captivating visions of hope derive their being from the excitement of the corresponding organ; and the felicity, which the pious experience, in acts of devotion, is the fruit of the exercise of the organ of veneration.

To the organs of the intellectual faculties, similar remarks are applicable. Their action also is pleasurable. The delight derived from the contemplation of colors, is not mere visual delight. It is the fruit of excitement in the organ of color. In confirmation of this, it may be observed, that the inferior animals see colored objects, as clearly as man does; some of them much more so. But they want the organ of color, or have it in very defective development, and do not, therefore enjoy them. Nor is it really the ear that enjoys music. The pleasure of "sweet sounds" is the result of action in the organ of tune. This is also proved by the fact, that many inferior animals, whose hearing is much more acute than that of man, experience no delight from music, because they are defective, or entirely wanting in that organ. The pleasure of imitation is lively, because the organ of imitation is excited. Of the processes of comparing and reasoning, the same may be affirmed. They afford pleasure, on account of the action

excited in the organs of comparison and causality. Cerebral action, then, is the source of mental gratification, in which happiness consists. Let the brain be unexercised, and the individual possessing it will be as destitute of happiness, as if he were dead. To all the purposes of feeling and intellect, he will be dead.

That man may be happy, it is necessary that he should have access to suitable objects, on which to exercise his several faculties. And so he has. The accessibility of these sources of gratification constitutes an element of that fitness and harmony, which pervade the universe. For the due exercise of his organs of domestic affection, man has wife, children, and friends. For the exercise of his organs of moral sentiment, he has kind and generous actions to perform, the beauties and sublimities of nature to admire, the bright and alluring objects of hope to pursue, justice to dispense to his fellow men, and a wise and beneficent Deity to worship. And, for the full exercise of his intellectual organs, the countless objects of creation, with all their properties and relations, are spread out before him. His sources of happiness, therefore, are ample, and perfectly suited to his constitutional endowments. That he may enjoy them, without abuse or alloy, it is only necessary that he should exercise his faculties on them, within the bounds prescribed by nature, giving to the higher an ascendency over the lower. As long as the moral and reflecting control and direct the knowing organs, and those of animal propensity, man's happiness is unimpaired; and he is prosperous in his undertakings. But, when he suffers the latter to take precedence of the former, and to be the guides of his conduct, misfortune and misery are sure to befall him.

In his illustrations and proofs of these several positions, our author is not only satisfactory, but peculiarly happy. He meets and masters, with entire ease, every objection that can be urged against his doctrines. He shows, in a particular manner, that it comports much better with the happiness of man, that he should be obliged to labor for subsistence and knowledge, than that he should have received the latter, as a native endowment, and the former from the spontaneous productions of the earth. Instead of being evils, therefore, exercise and even labor are blessings. Hence the reason, why the active pursuit of an object affords higher gratification than its attainment. In the former case there is more excitement, in the

latter more repose. For the further illustration of this subject, we commend to the reader the following extract.

"Supposing the human faculties to have received their present constitution, two arrangements may be fancied as instituted for the gratification of these powers. 1*st*. Infusing into them at birth *intuitive knowledge* of every object which they are fitted ever to comprehend; or, 2*dly*, Constituting them only as *capacities* for gaining knowledge by exercise and application, and surrounding them with objects bearing such relations towards them, that, when observed and attended to, they shall afford them high gratification; and, when unobserved and neglected, they shall occasion them uneasiness and pain; and the question occurs, Which mode would be most conducive to enjoyment? The general opinion will be in favor of the first; but the second appears to me to be preferable. If the first meal we had eaten had forever prevented the recurrence of hunger, it is obvious that all the pleasures of satisfying a healthy appetite would have been at an end; so that this apparent bounty would have greatly abridged our enjoyment. In like manner, if, our faculties being constituted as at present, intuitive knowledge had been communicated to us, so that, when an hour old, we should have been thoroughly acquainted with every object, quality, and relation that we could ever comprehend, all provision for the sustained activity of many of our faculties would have been done away with. When wealth is acquired, the miser's pleasure in it is diminished. He grasps after *more* with increasing avidity. He is supposed irrational in doing so; but he obeys the instinct of his nature. What he possesses, no longer satisfies Acquisitiveness; it is like food in the stomach, which gave pleasure in eating, and would give pain were it withdrawn, but which, when there, is attended with little positive sensation. The Miser's pleasure arises from the *active state* of Acquisitiveness, and only the pursuit and obtaining of *new treasures* can *maintain this state*. The same law is exemplified in the case of Love of Approbation. The gratification which it affords depends on its *active state*, and hence the necessity for *new increase*, and *higher mounting* in the scale of ambition, is constantly experienced by its victims. Napoleon, in exile, said, 'Let us live upon the past:' but he found this impossible; his predominating desires originated in Ambition and Self-esteem; and the past did not stimulate these powers, or maintain them in constant activity. In like manner, no musician, artist, poet, or philosopher, would reckon himself happy, however extensive his attainments, if informed, 'now you must stop, and live upon the past;' and the reason is still the same. New ideas, and new emotions, best excite and maintain in activity the faculties of the mind, and activity is essential to enjoyment.

If these views be correct, the consequences of imbuing the mind with intuitive knowledge, would not have been unquestionably beneficial. The limits of our acquirements would have been reached; our first step would have been our last; every object would have become old and familiar; Hope would have had no object of expectation; Cautiousness no object of fear; Wonder no gratification in novelty; monotony, insipidity, and mental satiety, would apparently have been the lot of man.

"According to the view now advanced, creation, in its present form, is more wisely and benevolently adapted to our constitution than if intuitive instruction had been showered on the mind at birth. By the actual arrangement, numerous noble faculties are bestowed; their objects are presented to them; these objects are naturally endowed with qualities fitted to benefit and delight us, when their uses and proper applications are discovered, and to injure and punish us for our ignorance, when their properties are misunderstood or misapplied; but we are left to find out all these qualities and relations by the exercise of the faculties themselves. In this manner, provision is made for ceaseless activity of the mental powers, and this constitutes the greatest delight. Wheat, for instance, is produced by the earth, and admirably adapted to the nutrition of the body; but it may be rendered more grateful to the organ of taste, more salubrious to the stomach, and more stimulating to the nervous and muscular systems, by being stripped of its external skin, ground into flour, and baked by fire into bread. Now, the Creator obviously pre-arranged all these relations, when he endowed wheat with its properties, and the human body with its qualities and functions. In withholding congenital and intuitive knowledge of these qualities and mutual relations, but in bestowing faculties of Individuality, Form, Coloring, Weight, Constructiveness, &c, fitted to find them out; in rendering the exercise of these faculties agreeable; and in leaving man, in this condition, to proceed for himself, — he appears to me to have conferred on him the highest boon. The earth produces also hemlock and foxglove; and, by the organic law, those substances, if taken in certain moderate quantities, remove diseases; if in excess, they occasion death: but, again, man's observing faculties are fitted, when applied under the guidance of Cautiousness and reflection, to make this discovery; and he is left to make it in this way, or suffer the consequences of neglect."

We regret that our limits do not permit us to extract anything from Section VII. in which our author treats of the "Application of the natural laws to the practical arrangements

of life?" We must be content with recommending it, which we do very cordially, to the attention of the reader.

Chap. III. which is very long, and is perhaps generally the most interesting and important in the book, is devoted to the discussion of the question, "To what extent are the miseries of mankind referable to infringement of the laws of nature?" As we find it impossible to condense this chapter, within reasonable bounds; and as we have no room for such extracts from it, as would give any adequate representation of it, we must refer the reader to it also, for a knowledge of its contents. We can present him only with the headings of its several sections.

Sect. I. treats of "The calamities arising from infringements of physical laws."

Sect. II. "On the evils that befall mankind, from infringement of the organic laws."

Sec. III. On the "Calamities arising from infringement of the moral law." In this section is included also a view of the evils attendant on a violation of the laws of intellect.

In his discussion of these topics, our author shows, that man can neither neglect nor transgress a natural law, without suffering the penalty of it. Nor can he obey it, without being, in some way, rewarded. Waiving any reference, therefore, to a future existence, morality and virtue are to be embraced and practised, on account of the benefits and happiness they confer, in this life; and vice to be avoided, in consequence of the certain punishment it inflicts. No other work we have ever read, has so undeniably established the position, that obedience to the natural laws is, from the inviolable connexion between cause and effect, followed by its reward, and disobedience by its penalty.

There is yet another respect, in which this discussion promises to be useful. We mean, the removal of certain prejudices and superstitions, which have entire possession of the minds of the uninformed, and from the influence of which even those of the enlightened are not yet free. They relate to supposed visitations, and inflictions of punishment immediately from Heaven, as well as to special beneficent interpositions of Providence, apart from the established operations of the laws of nature. In plainer terms, they have reference to events avowedly preternatural, and virtually miraculous. To exemplify our meaning.

It is the current belief, that physical evils are poured down on individuals and communities, on account of moral transgressions alone. Cities and nations are said to be visited by

pestilence, famine, earthquakes and inundations, in consequence of their impiety, and habitual violation of moral law. Nor is this all. When those evils are prevailing or impending, it is further believed, that they may be averted or removed, by certain moral or religious observances. Persons sick, or in peril by sea or land, are supposed to be restored to health, or rescued from danger, in answer to the pious petitions of their friends. Kings, and other potentates are alleged to be improved in knowledge and virtue, by the prayers of the church. Signal victories are attributed to similar influences. It is not many years, since Cadiz, when threatened by an inundation from the sea, was believed to have been preserved, by processions and supplications. The Neapolitans are persuaded that their city has often owed its safety, from the eruptions of Vesuvius, to the same cause. Society is filled and seriously annoyed, by superstitions of this kind.

Our author's disquisition tends directly to the overthrow of these errors, by an exposition of events and their true relations. It refers every occurrence to its proper cause. It shows that, in the administration of the universe, established chains of causation are never broken; that natural lines of sequence are never departed from; but that causes always produce effects, in affinity with themselves. The infringement of a physical or an organic law, is never *immediately* productive of a moral evil; nor does the breach of a moral law give rise to a physical or an organic evil. Each cause produces after its kind.

Were London, Marseilles, Bourdeaux, and other large European cities, visited, in former times, by pestilence; and are they now free from that evil? The reason is, not that they were then less virtuous, than they are at present, but less cleanly, and their population less observant generally of the organic laws. Was the country around Edinburgh much more afflicted by autumnal fever, at the beginning of the eighteenth century, than at the same period of the nineteenth? The cause is to be found, not in the improvement of the inhabitants in morality and virtue, but in the removal of the sources of malaria, by the improved cultivation of the soil. To this may be added, salutary changes in diet, and stricter observances of general purity. In the conversion of a sickly into a healthy country, the plough and the spade, judiciously employed, are much more efficacious, than thanksgiving and prayer. The latter are effective in their proper places; but not as safeguards against physical evils. Of the plague of Egypt the same may be said, as re-

specting other complaints. It is no judgment on the land, on account of immorality and crime: it is the natural product of the filth, deposited by the waters of the Nile, and left, by neglect, to turn to poison, under the influence of a burning sun. Nor, without the removal of that filth, could the inhabitants escape disease, though each one of them were possessed of sainted virtue, and apostolic piety. Does a country suffer under drought and famine? The visitation results from physical laws, and no moral or religious observances can remove it. The prejudices here alluded to cramp the human mind, misdirect its efforts, and retard its progress, in the knowledge of nature. From its tendency to remove them, therefore, the volume before us promises much good to mankind, by accelerating the march of liberal science.

Sect. IV. of this chapter, headed — "Moral advantages of punishment," contains views of the administration of things, in relation to man, highly interesting to the moralist and divine. It concludes with the following corollary.

"On the whole, therefore, no adequate reason appears for regarding the consequences of physical accidents in any other light than as direct punishments for infringements of the natural laws, and indirectly as a means of accomplishing moral and religious improvement."

Chap. IV. the last in the book, is "on the combined operation of the natural laws," and contains many important expositions of the causes of events, both fortunate and disastrous.

It has been represented, we trust satisfactorily, that each set of the "natural laws" operates in its own way, and produces results peculiar to itself; and that no one set can be productive of ends belonging to another. The breach of a moral law cannot be the immediate cause of a physical or an organic evil, nor the observance of a physical or an organic law the immediate cause of moral good. Each set of laws acts directly in its own line of causation, and cannot, except indirectly, act in a different one. But indirectly it can thus act. Obedience to the laws of the animal propensities, in opposition to those of the intellectual and moral faculties, may lead *indirectly* to a physical evil; but that must be necessarily the *immediate* effect of the violation of a physical law.

Is a vessel lost at sea? It is the immediate consequence of an infringement of the physical law of specific gravitation, between the vessel and the water. But that infringement is the result of some departure from the moral or intellectual

laws. To speak more intelligibly; it arises from ignorance or neglect of duty, on the part of the builders, owners, or navigators of the ship. The former are faulty in her bad construction or outfit, or the latter in her unskilful management. Hence results, as a direct consequence, the violation of the physical law of gravitation. Throughout the whole, the natural chain of causation is unbroken and obvious. The calamity neither occurs accidentally, nor is inflicted, by a special act of Providence, as the penalty of crime. Our author exemplifies this, by the two following disasters.

"During the French war, a squadron of English men-of-war was sent to the Baltic with military stores, and, in returning home up the Channel, they were beset, for two or three days, by a thick fog. It was about the middle of December, and no correct information was possessed of their exact situation. Some of the commanders proposed lying-to all night, and proceeding only during day, to avoid running ashore unawares. The Commodore was exceedingly attached to his wife and family, and stated his determination to pass Christmas with them in England if possible, and ordered the ships to sail straight on their voyage. The very same night they all struck on a sand-bank off the coast of Holland; two ships of the line were dashed to pieces, and every soul on board perished. The third ship drew less water, was forced over the bank by the waves and stranded on the beach, the crew saved, but led to a captivity of many years' duration. Now, these vessels were destroyed under the physical law; but this calamity owed its origin to the predominance of the animal over the moral and intellectual faculties in the commodore. The gratification which he sought to obtain was individual and selfish; and, if his Benevolence, Veneration, Conscientiousness, and Intellect, had been as alert and carried as forcibly home to his mind the operation of the physical laws, and the welfare of the men under his charge; nay, if these faculties had been sufficiently alive to see the danger to which he exposed his own life, and the happiness of his own wife and children, — he never could have followed the precipitate course which consigned himself, and so many brave men, to a watery grave, within a few hours after his resolution was formed.

"Very lately the Ogle Castle East Indiaman was offered a pilot coming up Channel, but the captain refused assistance, professing his own skill to be sufficient. In a few hours the ship ran aground on a sand-bank, and every human being perished in the waves. This also arose from the physical law, but the unfavorable operation of it sprung from Self-esteem, pretending to knowledge which the intellect did not possess; and,

as it is only by the latter that obedience can be yielded to the physical laws, the destruction of the ship was indirectly the consequence of infringement of the moral and intellectual laws."

Another example, of a more complicated character, which the work contains, is worthy of the attention of every one, but especially of the political economist, and the manufacturing and mercantile community. Its peculiar value consists in its pointing out the connexion between the prosperity of nations, and a strict observance of the higher laws of our nature.

"The last example of the mixed operation of the natural laws which I shall notice, is that which followed from the mercantile distresses of 1825–6. I have traced the origin of that visitation to excessive activity of Acquisitiveness, and a general ascendency of the animal and selfish faculties over the moral and intellectual powers. The punishments of these offences were manifold. The excesses infringed the moral law, and the chastisement for this was deprivation of the tranquil, steady enjoyment that flows only from the sentiments, with severe suffering in the ruin of fortune and blasting of hope. These disappointments produced mental anguish and depression; which occasioned unhealthy action in the brain. The action of the brain being disturbed, a morbid nervous influence was transmitted to the whole corporeal system; bodily disease was superadded to mental sorrow, and, in some instances, the unhappy sufferers committed suicide to escape from these aggravated evils. Under the organic law, the children produced in this period of mental depression, bodily distress, and organic derangement, will inherit weak bodies, with feeble and irritable minds, a hereditary chastisement of their father's transgressions."

The "Conclusion" and "Appendix" of the work are replete with matter of much interest. But they are already too dense to be any further epitomised. That the reader may derive from them the instruction they are fitted to impart, it is requisite that he should peruse them.

Such are our views of our author's production "On the Constitution of Man," and of the science, whose principles it so happily illustrates and applies. A few further remarks shall close our review.

This article is not so much intended to be itself instructive, as to serve as an index to sources, from which instruction may be drawn. We deem it proper, therefore, to point out a few more of these, to such persons, as may feel desirous of attain-

ing a competent acquaintance with Phrenology. They exist in the writings of Gall, Spurzheim, and Combe, especially in the "System of Phrenology" of the latter, and in the Edinburgh Phrenological Journal, one of the most distinguished Periodicals of the day. But the richest and most genuine source is the Book of Nature, particularly the chapter of it which treats of man. That is open to every one; when rightly understood, it never deceives; and from it the authors referred to, derive their information. Their works are but so many versions of extracts from that great volume, which, by carefully consulting it, any one can easily interpret for himself. In plain language, Phrenology is founded on observation; and those who wish to have a thorough knowledge of it, can attain it only by studying attentively the relations between the size and form of the human head, connected with individual temperament, and the manifestations of the human intellect. And that study, pursued to the requisite extent, will not fail to reward and gratify them. C.

Art. II. — Massachusetts General Hospital.

Death by Hemorrhage from the Brachial Artery.

A young man, twentyone years of age, was injured at Wellfleet, Mass. by the bursting of a gun, on Tuesday, July 31st, 1832. A fragment of the barrel was driven through the anterior part of the left arm, near the bend of the elbow. It entered over the inner edge of the biceps muscle, and passed downwards and outwards, emerging one and a half inches below the external condyle. The bone was uninjured.

A profuse hemorrhage took place at the moment; the patient thinks that he lost two quarts of blood in a few minutes; he compressed the arm however, powerfully, with the other hand, and walked a quarter of a mile, to the house at which he put up.

Medical aid was soon obtained. A tourniquet was applied, and attempts were made to tie the bleeding vessel. These being unsuccessful, the wound was filled with lint, over which compresses were laid, and a roller applied over the whole arm. The tourniquet was left on. Within twentyfour hours, the bleeding returned with great violence; the dressings were all

removed, and the artery again sought for, but still unsuccessfully, and the arm was then dressed as in the preceding day. For six days in succession there was a copious hemorrhage, and the wound was daily dressed as in the first instance.

The patient, having become extremely exhausted by the loss of blood, and being anxious to have some additional surgical aid, concluded to come to Boston. He was laid on a mattress on board a vessel, on the evening of August 6th, and was brought on a litter to the Mass. General Hospital, on the following day, at 4 o'clock P. M. He lost a large quantity of blood during the passage; the Captain of the vessel thinks it was not less than a gallon. The artery was not compressed by the tourniquet, the pad having probably slipped. At the time of his arrival at the Hospital he was in a state of partial syncope, with an exsanguineous countenance, and a small and feeble pulse. The arm was enormously swollen, being more than twice the size of the other. Some wine having been given to him, the operation of tying the artery was immediately done by Dr Hayward.

The tourniquet was removed and the artery was compressed by an assistant. On taking off the dressings, and removing the coagula from the wound, it was found necessary to dilate it, and the artery was then secured without much difficulty. It was not cut off, but wounded, and a ligature was placed above and below the wound. The artery was wounded where it bifurcates into the ulnar and radial arteries, the anterior half of the vessel being carried away by the fragment of the gun-barrel. The wound extended from three eighths of an inch above the bifurcation of the artery, down to a point in the ulnar artery, half an inch below the bifurcation. The artery was somewhat contracted both above and below the wound, and the orifice partially plugged by a coagulum; there was also a deposite of fibrin around the artery; both of which circumstances evinced a strong effort of nature to repair the injury. The above facts in relation to the state of the artery, were of course ascertained by a post mortem examination.

The patient suffered but little during the operation; he seemed to be extremely weak, so much so, that he could not raise his head to take drink without fainting. He did not lose more than two ounces of blood in the operation.

As soon as the artery was tied, the wound was dressed in the simplest manner, and the hand and arm wrapped in flannel. After the operation he took wine and water, wine whey and brandy and water, half an ounce every twenty minutes.

No material alteration took place till eleven o'clock at night, when he became delirious, and continued in that state till his death, which occurred at 9 o'clock the following morning.

Art. III. — Fistula Lachrymalis.

To the Conductors of the Medical Magazine.

In the prize dissertation on Fistula Lachrymalis in your September No. the writer suggests what he believes to be a new method of treating this unpleasant and often unmanageable complaint, viz: the plan of using caustic in a manner similar to the mode of its employment in cases of strictured urethra. He remarks that he "can only claim the merit, (if any exists) of adapting views intended for a different purpose to the disease in question." It would seem however, that he had neither made or seen any experiments of its use.

As it appears that the chief claim, if not the only title, of this essay to the favorable consideration of the committee, must have been the suggestion of this idea, I have been not a little surprised that a mode of treatment precisely the same (omitting certain unnecessary, complex and hypothetical apparatus,) employed by that original, talented and successful surgeon, the late Dr Nathan Smith, (whose character as a professor and a man, I, in common with thousands of others can never cease to revere) for I presume more than twenty years, should not have been in the recollection of some of the eminent gentlemen who adjudged the prize.

In a MS. copy of notes from his lectures on surgery taken in 1817, a sketch of his practice, which he characterizes as preferable in his opinion to all others, is thus summarily given.

"Close the lids and draw them towards the external canthus of the eye, by pressing them with the fingers of the left hand in that direction. This will render the tendon of the obicularis tense and conspicuous. Then cut down into the sac below this tendon, taking care to avoid it; introduce a probe into the sac and find the obstruction. Then substitute the bougie armed with one grain of caustic potash and press the alkali upon the opposing membrane. This will erode and the passage be restored."

In respect to the use of canulæ or tubes, of which the writer

of the treatise speaks so disparagingly, I would remark that it was some years since, and I presumed from its excellence still is, the practice of that experienced and scientific surgeon, Prof. Mussey of Dartmouth College, to employ those of a suitable diameter, formed of pure gold, as not being liable to oxidation and consequent destruction, as was found to be the case with his first attempts with those of silver. The lower end which rests within the nostril is filed on two opposite sides so as to make a slit for a few lines in length to obviate the danger of the lower orifice becoming closed by resting too closely in contact with the lining mucous membrane. The required length of tube is measured by marking on a silver probe introduced as far as it can be; — the tube is cut off so that the upper extremity may be at the lower part of the sac, and the parts healed over it. The fear of irritation, and ulceration through the palate into the mouth, which the writer of the essay apprehends, are not worth mentioning. The several cases in which I witnessed his operations after this manner, proved it to be less tedious and more efficacious than any other modes I have observed before or since. I have tried it with satisfaction in several cases and at present should not think of attempting any other operation.

In a paper in your fifth number on Scarlatina, no mention is made either in the directions for treatment, or in the cases cited, of what is generally and I believe correctly considered to be an important remedial agent, that is, counter irritation to the throat. This, as far as has fallen within my notice in an epidemic which has prevailed pretty extensively in this vicinity, should not be carried to the extent of vesication, as the peculiar inflammatory action and sloughiness prevailing in the fauces, are apt to attack the external surface; but short of this effect great advantage is manifestly obtained.

I have found that a better mode of administering the capsicum than the infusion, is to to agitate the mixture that a considerable quantity of the powder may be taken. This from examination will be found to lodge in the rough surface of the sloughy parts, and will prove a more speedy and efficacious means of changing the peculiar character of the diseased action.

L. V. Bell, M. D.

Derry, N. H. 28th Nov., 1832.

Art. IV. — Sickness in Mass. State Prison.

Report of an epidemic diarrhœa attended with peculiar symptoms, which prevailed in Massachusetts State Prison in the months of August, September and October, 1832, made to his Excellency, Levi Lincoln, Governor of the Commonwealth of Massachusetts.

By Wm. J. Walker, Physician of M. S. P.

To His Excellency Levi Lincoln.
Governor of the Commonwealth of Massachusetts.

Sir. — On the evening of the fifth of August about sunsetting, I received a message from the Warden of the State Prison, stating that many of the convicts were suffering severe pain and requesting my attendance. I repaired immediately to the Prison and found that two men had been removed to the Hospital during the afternoon, that others had since sickened, and that the disease was becoming general among them. My attention was first drawn to several who had been taken from their cells and placed in the gallery that they might be more easily assisted. An examination of these cases convinced me that I had to do with a disease of no ordinary grade or character.

In answer to my inquiry what made them sick, they each informed me that they had been well up to that day, and knew not what had produced their malady. I next visited some in their cells and found a remarkable similarity in all; that although the disease had been recently commenced, its effects had been truly wonderful and distressing. The contortions of countenance, writhing of body under pain, and outcries of suffering, issuing from every part of the prison presented a scene of distress, which, familiar as I have been with scenes of suffering at military hospitals, I have never seen equalled. The occasion required prompt and decisive measures; but here a difficulty presented itself. Night had arrived, — as usual the prison was under the care of the warden and night watch of officers only, while its other officers were at their homes or scattered about the town. The Hospital was in another building some rods distant, there were no watchmen on the walls, and darkness might afford facilities for escape. Under these circumstances I advised with the Warden and in coöperation with him executed the following plan of operations. First, a messenger was sent to summons the whole corps of officers to their posts; second, the nurse was required to have all the beds in the hos-

pital in readiness for the reception of the sick; third, a man was sent round the prison with orders to inquire at every cell and where he found a man sick to take from him his water can and place a mark upon the door. Following close upon the heels of this messenger, I visited all the sick in their cells, encouraged them to bear their pain with fortitude, assured them the means of relief were at hand, and sorted out such as suffered most severely and placed them together in the gallery.

An officer was now directed to go round among the cells once in half an hour and give a pill of opium to each man, until his suffering should abate. The next object was to convey the sickest patients to the hospital; and I am happy to say, such was the state of discipline among the officers and such their alacrity on this occasion, that the warden had no difficulty in conveying the sick from prison to prison, nor in passing every necessary person or article without delay and without at all endangering the safe keeping of the convicts, although the night watch of officers only was present during these operations. From this time I am confident 30 minutes had not elapsed before we were able to send aid, courage and confidence to the remotest cells of this extensive establishment. Having removed the first class of patients to the hospital, and prescribed for their cases as will be explained by and bye, I returned to the new prison, examined all the sick in rotation, collected another class of patients and had them conveyed to the hospital likewise. In this manner our time passed until about 9 o'clock, when an officer could be spared to invite the medical gentlemen of this town and the city of Boston to attend and witness the disease. These gentlemen were soon in attendance and afforded us much relief by their advice and assistance. Some time after midnight I made a report of the state of things to your Excellency, and early next morning addressed the following note to the warden and inspectors of the prison.

Gentlemen, — I find it a duty to advise and request that an accurate chemical analysis be made, by some competent persons under your authority of the remnants of food left from yesterday's ration, and likewise of the stools of the sick, and in a particular manner to inquire if they contain anything poisonous or deleterious to health. Respectfully yours,

Wm. J. Walker, *Physician M. S. Prison.*

Monday Morning, 7 o'clock, Aug. 6, 1832.

P. S. I have further to request that an able apothecary may

examine and weigh all the articles in the dispensary, compare them with the prescriptions made, with the quantities purchased, and report any deficiency of medicines which might prove deleterious if mixed with food — and that his report be sealed and not opened until the report of the analyzing committee

I was prompted to the above course by the conviction that there might be those who would believe this disease had been produced by culpable negligence, in not securing healthy food for the convicts, or by poisonous articles mixed therewith; that important legislative or judicial proceedings might grow out of the case, and that it would be expected of the officers of this institution to establish the facts as they actually existed, and upon the most unquestionable authority.

In compliance with this note * and instructions soon after received from your Excellency, the Inspectors employed professor Webster of Harvard College, to examine the utensils and premises of the prison and to analyze the food used by the convicts on the day preceding the appearance of the disease. They likewise employed Mr Daniel White of the firm of Samuel Kidder & Co., a highly respectable druggist of this town, to examine the medicines in the dispensary of the prison and to report anything wrong in that department. These gentlemen have performed the duties assigned them with their accustomed accuracy, as will be seen by their reports.† At the same time John Ware, M. D., Joshua B. Flint, M. D., of Boston and Josiah S. Hurd, M. D. of this town, were joined with me in consultation to attend the sick and develope the true nature of the disease. To these gentlemen I shall always feel grateful for their kind attention and judicious advice on this occasion.

Having premised thus much I shall proceed to record the phenomena which characterized this disease; the treatment adopted, with its success; its resemblance and discrepancy compared with certain diseases familiar to us, and finally to draw such inferences as to its origin and nature as facts seem to warrant and require. During the first 48 hours there was neither pain in the head nor disturbance of the intellectual functions, but when fever supervened upon the primary affection, headache was among its concomitant symptoms — it likewise existed as a primary symptom in some of the cases which commenced subsequent to the 6th of August. The air thrown out by expiration was in no case as warm as usual, and in some cases it was cold; the

* Vide appendix, A.
† Vide appendix B and C.

lungs could be inflated and emptied of air to the full extent without increasing pain, the tone of voice was similar in all the cases, and such as to indicate severe suffering; the attitude chosen by the sick was recumbent, upon the back — head thrown backwards — arms not folded on the epigastrium — legs drawn up with the heels close to the buttocks — so as to enable the patients to maintain a constant rocking of the body from side to side, — the pain was confined to the abdomen, there was no permanent contraction of the abdominal muscles, nor did pressure on them either increase or diminish suffering — there was no flatulence, no tenesmus.

During my whole attendance I did not observe any spasmodic action of the abdominal muscles or of the limbs. In one case treated by Doctor Hurd spasmodic motions were observed; and another patient told me some days after that during his sickness he could not prevent his legs from starting and suddenly drawing up. The countenance was pallid, the features contracted and somewhat distorted, — the skin was cool in all and in some cases it was cold, — it was not sweaty or unctuous, the thirst was insatiable and distressing, the tongue was not coated, but was somewhat exanguious and inclined to a sublivid color, its temperature varied much and often, — at one time it would be but little below its natural temperature, at another cool, and again cold, its greatest degree of coldness equalled that of the flesh or blood of a cold blooded animal, or what we experience when we place our hand on a wall recently drenched by a summer shower. During the progress of this disease the tongue was seldom found to be coated, — it was sometimes whitish, but generally of a cherry red, not smooth or swollen, but retaining its usual bilious appearance and differing from a natural state mostly in color. The taste was not bitter or nauseous; a disposition to vomit was common to all. The quantity of matter thrown from the stomach however was small, and excepting in a few cases where food was discharged, consisted of a white tenacious liquid, unmixed with bile, ascidities, or anything likely to provoke vomiting. The evacuations by stool consisted at first of healthy, natural fœces, next a brownish liquid, changing to a pink, being tinged with blood, after the disease had continued a certain time. There were however, no coagula of blood, bile, or undigested food to be found in them. In a few cases these stools were succeeded by others having the appearance and consistence of cream. I have since queried with myself if this might not have been pure chyle

thrown back upon the intestines by an inverted action of the chyliferous vessels. The quantity evacuated was great in all cases, in some it was enormous, — most of them filled their night buckets, which contain more than ten pounds of water by weight, many filled them twice, while some filled them partly full the third time. We are therefore warranted in saying that the bodies of many of the convicts were lightened twenty pounds within a few hours, for it must be remembered that all liquids were removed from them as soon as possible after the outbreaking of the disease. The pulse was exceedingly affected and variable — at one time it would be full, hard, quick and bounding, then small, wiry, hard and creeping; again it could with difficulty be felt at the wrist, or not at all; when it could be felt it was uniformly hard, and such as to indicate prompt and copious blood letting, and when relief was obtained it became preternaturally slow. The remedies employed at the commencement of this disease, were entire abstinence from liquids, frictions of the skin, external warmth, opium and blood-letting. By abstinence from liquids we were enabled to keep opium on the stomach, as well as to lessen the disposition to vomit and purge. By friction and external warmth we were enabled in some measure to restore the circulation and natural warmth of the body, and give opportunities for practising more efficient remedies. By the prompt and liberal use of opium many of the milder cases were so far relieved as to require only diet, rest and occasional laxatives for their cure. In other cases its use relieved pain, diminished vomiting and purging, promoted warmth and proved a valuable auxiliary to other remedies. The quantity of opium dispensed at a dose was about 3 grains and at intervals of thirty minutes. The greatest aggregate quantity taken by any individual, I should think was about twenty grains or equal to 500 drops of laudanum — as at first, the most severe cases were treated by blood-letting, and as from time to time those suffering the greatest pain were subjected to the same remedy and promptly relieved by it, we cannot say whether there were or were not some cases which might have wholly resisted the curative powers of opium. Certain it is however that opium relieved pain and suspended the symptoms for a while in many cases, where at the end of twentyfour to fortyeight hours the disease returned. In practising venesection under symptoms as above stated, I anticipated much difficulty in obtaining a ready and sufficient evacuation of blood. There was however but one case in which frictions and extensive

incisions into the veins did not enable us to obtain the requisite quantity. Had we been some hours later after the invasion of the disease I fear it would have been otherwise. The case of exception above alluded to was treated by my friend Doctor Hurd, who represents that he found the man cold and pulseless, with spasmodic action of the muscles of the legs and all the appearances of approaching dissolution. Under these circumstances he attempted venesection at the arm, but without success — he next opened the temporal artery and obtained blood of a darker color than is common to arteries, the blood at first merely trickled down the temple,—after eight or ten minutes it flowed more freely and of a better color—in about thirty minutes a sufficient quantity was obtained and the man was relieved. That the difficulty of obtaining blood in this case depended upon the state of circulation, and not upon peculiar organization, or insufficient incision into the vessel, is clearly proved by the facts that the artery was opened immediately anterior to the ear, that towards the close of the operation the blood became of a vermilion color, flowed in a full stream and that several copious secondary hemorrhages occurred on subsequent days and required much care to restrain. When practised at the commencement of the disease, bleeding was followed by immediate and perfect relief, so much so that men with skin and tongue cold, and pulse absent or scarcely perceptible, were entirely relieved by the loss of from 16 to 32 ʒ of blood — the pain was alleviated, vomiting and diarrhœa removed, and the disease as it were extinguished. Hence it occurred that those who were most severely attacked were not only soonest relieved from suffering, but speedily restored to health, while those whose cases were trusted to opium and not relieved by it, or for other reasons not bled at the commencement, passed into a new state of disease, characterized by headache, pain and soreness of the epigastrium, thirst, dysurea, diarrhœa of a mucous character, with skin and pulse approaching to what is above related, but alternating with occasional flushes of fever and febrile development of pulse. For the removal of these symptoms we were constrained not only to bleed, but to repeat the operation at intervals for some weeks, to give occasional laxatives, blister and apply moxas, maintain the most rigid diet with demulcent drinks, have recourse to opiate enemas for the removal of diarrhœa, and frequently to see our patients thrown back into their former state by trivial accidents or imprudence.

The whole number of convicts attacked with this complaint

was 196 ; of this number 115 sickened within the first twenty-four hours and the remaining eightyone at various times after. The last patient severely attacked was on the 7th September, and the last discharged from the hospital cured of this malady on the 23d October, having resided in the hospital 79 days. Thus the whole number finally recovered, notwithstanding the severity of the first symptoms and the protracted sufferings of those whose disease was not wholly arrested by rigid treatment at the commencement.

Having said thus much of the treatment, we naturally come to the inquiry, what was the disease and what were its causes. If we compare it with the various diseases of the abdomen which most nearly resemble it, such as inflammation of the peritoneum or viscera of the abdominal cavity, spasmodic affections, icterus, colic, colica pictonum, cholera morbus, dysentery, or with the effects of corrosive poisons taken into the stomach, we shall find in each of these complaints striking symptoms not noticed in this, while here the excessive purging, coldness and low state of the pulse are symptoms not common any disease with which we are familiar in this part of the globe.

In searching for local causes we have been equally unsuccessful. The diet of the convicts, always plain and wholesome, had received particular attention during the present season, the use of old potatoes had been dispensed with, and rice substituted in its stead. The ventilation of the prison, which had proved sufficient in former years, had been much increased, while the cleanliness of person and habitation required and maintained by the authorities of the prison is not surpassed in the comfortable dwellings of our country. The most careful examinations made by the inspectors as well as by every officer of the institution could discover nothing poisonous in or about the diet or premises of the prison — none was found by chemical analysis, nor could the complaint have had its origin in a poisonous principle sometimes accidentally present in food usually healthy, such as shell fish, cheese, partridges, &c, since the same parcels of food were used on subsequent days without the recurrence of similar effects. It is true that certain articles in the class of acrid poisons, such as eleterium, croton oil, and perhaps others in undue doses might produce excessive purging with nausea, yet we have no reason to believe that the quantity evacuated could be so great, of such appearance, or relieved by the same means. The same observations will hold

good as to the various articles of the materia medica, and for still stronger reasons are they true as respects the remaining classes of poisons usually denominated astringent, narcotic, narcotico-acrid and sceptic, since poisons produce their specific effects on the human body and no other as surely as any other agents; and when articles of these classes are taken into the body they do not produce vomiting and purging, but symptoms widely different. Thus we see that spurred rye, which belongs to the class of narcotico-acrid poisons, could have no agency in producing this disease even if it had been found in much greater quantity than is mentioned in the report of the inspectors — fiftytwo grains being found in three fourths of a bushel of sound grain. But since this substance has been frequently, though as I believe unjustly, considered the cause of other epidemic diseases in our country, and as a belief in this opinion is calculated to do much injury in a community so largely nourished by this grain, I trust I may be excused for saying the subject has been fully studied, that spurred rye has been found to produce the same effects on man as on other animals; and that experiments on inferior animals prove that when they are fed upon it for five or six weeks death ensues, and is attended with gangrenous spots upon the surface and internal viscera, and mortification of the extremities; but to produce this effect one third of their food must consist of spurred rye. Experiment likewise teaches that a very large dose taken at once may produce convulsions, other nervous symptoms, and death. I will merely add that I have verified these experiments and found a dose of sixty grains necessary to destroy so small an animal as a pigeon, and that this dose sometimes fails, — that a small rat having eaten ninetyfive grains in thirteen days, died in convulsions, and that mortification had commenced at the end of his tail, — that chickens may eat thirty grains per day for weeks, without apparent injury; — that I have known thirty, forty, sixty and eighty grains taken at a time by different individuals of the human family with only slight temporary inconvenience. — From the above it will be readily granted that the small quantity of spurs found among the rye of our country cannot be considered as dangerous to life or even prejudicial to health. From the above considerations I feel warranted in inferring that the late disease at the prison was not produced by improper food, or poisonous articles mixed therewith, that it was not a disease common among us, but an epidemic of peculiar character, originating in some atmospheric or telluric causes, which we can neither explain, appreciate nor control.

December 3, 1832.

The subscribers having attended the convicts at the Massachusetts State Prison during the epidemic disease which prevailed in August last, fully agree in the description given by Doctor Walker of its symptoms and character.

John Ware,
J. Stearns Hurd,
Joshua B. Flint.

Worcester, Aug 6, 1832, 10 o'clock A. M.

Sir, — The communications of yourself, and physician of the State Prison, which I have just received, announcing a most extraordinary attack of disease in that institution, give me most anxious and distressing apprehensions. I have full confidence, however, that every means which human prudence and wisdom can devise will be promptly adopted by yourself and the officers of the prison, to mitigate, and if it may be under Providence, to arrest this appalling calamity.

Whatever of authority to this end may be in the executive, you may confidently rely upon, in justification both of measures of relief, or prevention. Let the most skilful physicians be consulted and employed, in aid of our own most excellent professional officer. Discontinue the labor of the convicts if that should be deemed necessary, and cause every accommodation to be made for the hospital treatment, that the capacity of the prison will admit. The inspectors should be *immediately and often* consulted, and if it should become necessary the executive council shall be promptly convened. Yet I know not that any interposition, to change the situation of the convicts, with the disease upon them, or carrying the alarm which its existence would produce, away with them, would give greater security. The prison, even as a hospital, with the medical assistance which can be had there, is probably the most eligible place in which they could be secured. But I pray you advise me by every mail, remembering that I shall regard no trouble or fatigue, to be in the way of the performance of my official duty.

Doctor Walker will accept my thanks for his communication, and will favor me with regular reports. In haste &c,

L. Lincoln.

To Charles Lincoln, Jr. Esq. Warden.

Harvard University, Cambridge, Aug. 7, 1832.

Dear Sir, — In compliance with the request in your letter of yesterday, I repaired to the prison in Charlestown and exam-

ined the various articles of food remaining from what had been eaten by the prisoners on Sunday. I also examined the vessels in which the food had been prepared and distributed. Neither in the food nor in the vessels could I discover any deleterious article. In the rye used as a substitute for coffee, however a portion of diseased rye known as spurred rye was found, but not in sufficient quantity to have caused the symptoms noticed in the prisoners. It not being convenient to institute any analytical examination of the articles of food at the prison, I received portions of the rice, bread and other articles from the Warden, together with some of the matter discharged from the patients, which I have examined with the usual chemical methods, in the Laboratory of the University. This examination is just completed, and I have the pleasure to state that no pernicious substance has been detected in any of the articles.

I have the honor to be, with great respect,
Your obedient servant, J. W. Webster.

To the Hon. Charles Wells, Inspector of the State Prison.

Charlestown, Aug 6, 1832.

To the Warden and Inspectors of the Mass. State Prison.

Gentlemen,— I have complied with your request, and have examined with care the medicines in the dispensary of the prison, compared the purchases with the quantities on hand, and am satisfied there is no wantage not reasonably accounted for by the prescriptions as recorded in the books of the prison.

Very respectfully your obedient servant,
Daniel White, *Apothecary.*

Art. V. — Ganglionary System of Nerves.

An Essay on the Ganglionary System of Nerves in the Cavity of Cranium, and its use. By William Ingalls, M. D.

The object of this Essay appears to be the promulgation of some new views respecting the functions of the pituitary and pineal glands, the tuber cinereum and mammillary eminences, and consists chiefly in a very minute and scholastic recital of the relations and communications of these bodies, with other cerebral parts. The veteran anatomist, who is its author, has

certainly chosen a portion of structure which offers as fair a field for hypothesis, as any he could find in the body, and he seems to have availed himself of the "privilegia loci" to an extent, not a little startling to the matter-of-fact, inductive spirit of the present day.

The following quotations will, perhaps, enable the reader to understand the scope and tenor of his theory, quite as well as a perusal of the entire pamphlet.

"From a review of the structure, arrangement, and distribution of the various organs, above described; and their being particularly adapted to accomplish the purpose for which they were evidently designed, the mind is irresistibly impelled to the conclusion, the ENERGY and ACTIVITY of the BRAIN, like the liver, heart and other viscera in the abdominal and thoracic cavities, must depend on a GANGLIONARY SYSTEM OF NERVES. Should this position be eventually established, it would afford a foundation for the attainment of a clearer and more precise knowledge of the physiology of the brain." — p. 15.

"It is thought by many to be capable of demonstration, the diseased state of the ganglia of the trisplanchnic nerve, may have an important agency in impairing, disturbing, and even destroying the functions of viscera essential to life.

"Hence, if it be established, the glands and other bodies contained in the cavity of the cranium are found to discharge the office of ganglia, the brain will undoubtedly be liable to suffer from the disordered affections of these parts." — p. 9.

"If we take a survey of the wide range which the cords or nerves, above described, perform, the mind must be convinced of the similarity existing between these and the nerves of the ganglionary system in the other cavities. In tracing the cords from ganglion to ganglion, commencing with the pineal gland, we find that the posterior peduncle is connected with the tubercula quadrigemina, and the anterior with the eminentia mammillaris; that from the eminentia mammillaris depart three medullary cords, an anterior, middle and posterior; the two latter travel backwards, the middle terminating in the corpus fimbriatum, and the posterior anastamosing with the semicircularis to form a plexus; that the branches of the anterior commissure are united with those of the above plexus and the corpus fimbriatum posteriorly, and anteriorly with the external root or origin of the olfactory nerve; and that this nerve is connected by its internal root or origin either immediately or through the medium of the tuber cinereum with the optic nerve. To this it may be added, the anterior commissure is connected with the tuber cinereum. Hence

by the agency of the above mentioned cords and their appendages, the ganglia, a stimulus necessary to its functions is not only supplied to the brain, but a mutual relation is preserved between the peripheral and the central parts of this viscus, and the optic nerve." —p. 13, 14.

Art. VI. — Spurzheim on Education.

A View of the Elementary Principles of Education, founded on the Study of the Nature of Man. By G. Spurzheim, M. D. Marsh, Capen & Lyon.

These enterprising publishers have undertaken to give to their countrymen, reprints of all the most valuable and popular works of Dr Spurzheim, and we believe they will find themselves sustained in it by a liberal patronage. We know that there is a very strong and extensive desire in our own community to possess some permanent, authentic records of the interesting communications respecting the nature and relations of man, which it was the good fortune of some of us to receive from the lips of the departed philosopher; and for those at a distance, who have been deprived of the anticipated pleasure of his personal instructions, these publications afford the only means of becoming acquainted with the "new philosophy," or with the scientific discoveries and observations, on which it professes to be founded.

Certainly, if the other volumes be as good of the kind, — as agreeable and instructive as the one before us, the public and the publishers will not fail to acknowledge each other mutual benefactors.

We shall not, at present, attempt a critical analysis of it, as that would naturally lead us into a course of Phrenological remarks, much like those which have just been presented to our readers, in a very acceptable manner, in the Review of Combe.

Let it not be supposed, however, that, because the principles and precepts in the volume before us, are founded on the author's pecular views of the constitution of the mind, they are either unintelligible or uninteresting to those who have not stuied phrenology. No one who is practically concerned in the great subject of Education, can be faithful to himself, and to those he may influence, without reading this essay; and to him

who loves to speculate and philosophize about it, we can commend Dr Spurzheim's book as abounding in materials for the exercise of his favorite study.

To us it seems to be the most fundamental and thorough treatise we have met with on Education, in its most extended and practical sense.

The following paragraphs from the chapter on the Laws of Hereditary Descent, will serve at once to give a general idea of the extensive and radical view which the author has taken of his subject, and to supply some valuable practical hints on a point which is too generally overlooked or untouched in essays on human improvement.

"The degeneration of man, too, is certain, in families who intermarry among themselves. Uncles and nieces, or first cousins, or cousins who commit this error for several generations, have no children, or their progeny is commonly feeble. The smaller the number of choice, the quicker the degeneration takes place, and no class of society can be made an exception from this law. Any bodily or mental affliction which may happen to originate in one individual soon affects such families. This frequently happens among the rich and high ranks; and, as their manner of living is not conducive to bodily strength, it is quite natural that there should be so many living proofs of the truth of this proposition, which invites the friends of humanity to admire the law of compensation."—pp. 44, 45.

"It is indeed a pity that the laws of hereditary descent are so much neglected, whilst, by attention to them, not only the condition of single families, but of whole nations, might be improved beyond imagination, in figure, stature, complexion, health, talents, and moral feelings. I consider, with Aristotle, that the natural and innate differences of man are the basis of all political economy. He who can convince the world of the importance of the laws of hereditary descent, and induce mankind to conduct themselves accordingly, will do more good to them, and contribute more to their improvement, than all institutions, and all systems of education. Yet they embrace more than a choice, according to the beauty of configuration, and to the vigor of body and mind. The state of health of both parents, their age, their previous manner of living, contribute to the development of the embryon; and the state of health of the mother and her vital functions, as digestion, respiration, circulation, &c, during pregnancy are likewise of great weight."—p. 46.

"Three successive generations appear to be necessary to produce an effectual change be it for health or disease. 'Si le goître,' says Dr Fodere, 'n'est qu' accidental, et qu'il n'y ait

qu'un des parens affecté, les enfans ne naissent pas goitreux. Si de pere en fils un goitreux a épousé une goitreuse pendant deux générations, et dans un pays où le goître est endemique, à la troisieme génération l'enfant qui nait, n'est pas seulement goitreux, mais il est encore cretin.' ('Traité du Goitre, et du Cretinisme,' Paris, 1800, p. 69.) According to the laws of the creation, therefore, it is said, that 'the Lord visits those who hate him (in my opinion who do not submit to his laws,) to the third and fourth generation;' viz. by their hereditary dispositions.

"Such causes as produce what is called the old age of nations deserve to be remarked. Luxury belongs to them, and its influence, if continued for several generations, weakens body and mind, not only of families, but of whole nations. The degeneration of the organic condition of man, in general, is not sufficiently understood, and is of greater effect than the political economists of modern days are aware of. This neglect is undoubtedly the most influential cause why families and nations disappear."—pp. 47, 48.

"The Jews are a striking example, that climate and external influences are less powerful in changing man, than propagation. They are dispersed in every country of the globe, and though, owing to the climate they have inhabited, their complexion may have changed, yet, being prohibited by sacred institutions from intermarrying with other nations they are still distinguishable from other people.

"The ancient legislators were very attentive to the laws of propagation. Moses complains (Gen. vi.) that the sons of God saw the daughters of men, that they were fair, that they took them wives of all which they chose: he divided his people into tribes, but prohibited on pain of death, the intermarriage of the near relations. (Levit. xviii.)

"The Greeks, as appears from their customs, philosophy and legislation, had particularly in view the beauty and vigor of the human constitution. 'As we,' says Plutarch, ('De Nobilitate,') 'are anxious to have dogs and horses from a good breed, why should we marry the daughters of bad parents?' Plato spoke against marriages betwixt relations. He, as well as Solon and Aristotle, considered also the age at which it was best to marry. The ancient philosophers commonly fixed it between eighteen and twentyfour for a woman, and between thirty and thirtysix for a man.

"It may be replied, that these considerations can never become practical rules of conduct for society at large. In the actual situation of things, I will not maintain the contrary. But we must also admit, that the laws of the Creator will not change to gratify our fancy. If we will not submit to his dictates, we

have no right to complain of being punished by unavoidable though disagreeable results. Christian principles are not sufficiently exercised in society, yet it is not, on this account, considered superfluous to teach them ; and he who loves mankind will wish for their promulgation. Now, the laws of hereditary descent are in the same situation. Nay, if observed, they would even tend to prepare mankind to receive and keep the precepts of Christianity, which, in the actual and common way of Providence, seems impossible.' — pp. 49, 50.

We admire the generous and just views contained in the following passages on the education of the feelings, which was a favorite topic with the estimable author.

" With respect to the Feelings, education is still more defective. It is commonly believed that it is more difficult to cultivate the propensities and sentiments than the intellectual powers. It is even said that the feelings cannot be taught. This proposition, however, is not clearly stated. The feelings cannot be taught, if by this proposition we mean, that they may be given by education; in this sense also understanding cannot be communicated. Both intellect and feelings are innate or given by the Creator, but the latter may be exercised in the same manner as the intellect, not by the action of the faculty of language, or by learning signs, or by exercising the verbal memory, but by putting the feelings themselves in action. I even think that it is much easier to exercise the feelings than the intellectual powers.

" It cannot be too frequently repeated, that the Feelings do not result from intellect, any more than intellect is the result of the feelings. No one is benevolent, just, timid, courageous, haughty, or affectionate, in proportion to his understanding, nor has he penetration on account of his feelings. Moreover, each affective, as well as each intellectual faculty, must and may be exercised for itself. Man learns to be courageous, circumspect, ambitious, just, or benevolent, as he learns to sing, to calculate, to measure, to speak, and to reflect. When often exposed to danger, he learns to meet death without fear. By habit he becomes indifferent to destruction. The heart, as the Chinese proverb states, goes farther than understanding.

" Thus, bring men into favorable situations, calculated to call forth their feelings, and these will be strengthened. In order to cultivate benevolence, one should not frequent only the society of rich and opulent persons, and learn by heart descriptions of charity ; he must experience misery himself and contemplate the painful situations of others. There are more poor, willing to give charity from their necessity, than rich from their superfluity. If all our whims and fancies have generally been satisfied, the feelings of conscientiousness and benevolence

towards others are less excited, than if our wishes have been contradicted and reformed. For the same reason, moral feelings will not improve by frequenting places of debauchery. * * *

"The knowledge of the means of exciting the powers is very important, but not better understood than the fundamental powers themselves. It is time to abandon the immense error, that words and precepts are sufficient to call internal feelings and intellectual faculties into active exercise. Gospel-preaching is infinite, but many of those who deliver exquisite sermons are too often obliged to add: Do what I say, and not what I do. Now, if they themselves show no faith by their works, how can they expect others to do so? Let education be practical, and the means of excitement adequate to the innate dispositions. Bold children reap advantage from being brought up alone, but timid ones must be early accustomed to the society of strangers. Obstinacy will increase by unseasonable vexations, while just and quiet resistance or mild treatment may suppress it. The feelings are rather moved by a dramatic representation than by a monotonous sermon. The sight of a person wounded or in danger, makes a greater impression on the mind, than reading that thousands have been killed in a battle. Natural language, in general, has more effect on the feelings than artificial signs. We are, for instance, more likely to smile or laugh on looking at a gay face, than on hearing the word gayety mentioned.

"The effect of external impressions on internal faculties is proportionate to the assistance which the external senses give to the internal faculties. I refer particularly to what I said of the mediate functions of the external senses, in vol. I. of Phrenology. In that way, the influence of religious ceremonies on common people, is easily explained and ought not to be overlooked. Music, and representations of objects and facts in paintings and sculpture, may excite various kinds of feelings, the inferior as well as the superior. It is true, that these means may be and have been abused; but I think it wrong on that account to reject them altogether. Let the impressions on the senses be adapted to the feelings we wish to excite, and these will be exercised. Church-music should certainly be different from that of the ball-room, but music itself ought not, therefore, to be considered as useless in inspiring religious feelings. By means of music, the soldier may be incited to fight, and the Christian to adore his Creator. The great point is, not to confound the means with the aim, and not to consider the first as the second. Religious ceremonies are nothing but means to become morally good; and if they do not tend to that purpose, they lead us into error. The practice of them will not improve the moral conduct any more than learning the commandments by heart will do. It is also true that the effect of music is different in different individ-

uals ; but it is a great instance of ignorant bigotry and intolerance in persons to exclaim against its use in religion, because they themselves are unfortunately insensible to its charms."—pp. 95, 96.

Let those who attempt to bring odium on the principles of Phrenology, by imputing to them anti-religious tendencies, read the following remarks from their great Apostle, and answer, if they can anywhere find sentiments more congenial to the benign spirit of Christianity.

" I am sorry to observe, that generally the cultivation of the understanding constitutes the principal object of education ; and that in different countries, the pupils of public establishments smile with pity at praise given for good behaviour." -- p. 143.

" In examining mankind at large, we shall find that general happiness is founded more on morality than on intellect. Public establishments for relieving distress, improving morality and correcting manners, are more beneficial to society than colleges for the study of mathematics under the government of conquerors. Morality ought to be the aim, and understanding but a means of attaining it. Those, however, who know my ideas on the primitive powers of Man, and on their moral arrangement, will know that I distinguish morality from religious creeds ; that my God is a God of union, who wishes to save and not destroy ; and that, in my opinion, charity, or general love, is the greatest of virtues. They will perceive that I do not agree with teachers who place the love of their country, and that of glory, above the love of Mankind ; and that I maintain the authority and the advantage of the Christian principle, which commands us to love every one as our neighbor. Jesus called *him* his brother who did the will of his Father. I allow, that we owe obligations to our parents, and to our country ; indeed I admit that there is a primitive feeling of attachment to all beings around us. But this propensity is given also to the lower animals, and is far inferior to general love. He who considers the wants of the poor, and the causes of those wants ; the deserts of the poor, the possibility and necessary means of improving their situation ; who will never encourage idleness and disorder ; who considers attachment as a quality of secondary weight ; who relieves him first that deserves it best ; and who prefers his countrymen, only in so far as they are equally meritorious, is far nobler than those who are influenced by the love of their country or by a religious creed alone, to the neglect of this universal Benevolence." — pp. 144,—145.

" All sects of religion must agree that morality is necessary to the welfare of the human race, however different their opinions may be about the mode of attaining it. But I have no hesitation in declaring against any creed that undermines charity, and

which teaches children that those who do not believe as they themselves do, and that those who wish to adopt different means in order to please their MAKER, are damned. As Christianity evidently tends to unite all men in the presence of GOD, it appears to me that we are entitled to reject every interpretation of any passage of the Gospel which does not agree with general peace. The superiority of the Christian principles of morality, is proved and recommended by their good effects ; and, in this way, belief is converted into conviction.

" Modified ideas about the means of pleasing GOD are natural and present a large field for teaching tolerance and mutual forbearance. Various formalities are considered as agreeable to GOD ; but history informs us, that many of those, used by different sects, are borrowed from paganism. Every one ought to be permitted to do as he thinks right, unless the general happiness of Mankind be disturbed by it. I think that he is too proud who believes that he can add to, or exalt the happiness of his CREATOR, to whose dictates all that man can do is to submit. In submitting to his dictates, we practise the true and undefiled religion, viz. in this way we show that we are tied to GOD, and obey his will. Thus, it is an important point, in teaching religion, never to confound the *aim* with the *means*. The former is universal happiness, and loving our neighbor as one's self. The means which lead to it are various, and differences of opinion in regard to them are to be expected. It seems, however, a great error to look for happiness from Divine influence, while the natural means of producing it, appointed by the CREATOR to be observed, in the ordinary way of Providence, are neglected."— pp. 146 —148.

INTELLIGENCE.

A Phrenological Society has been instituted in Boston, and was organized on the 28th of Dec., the birth-day of the lamented Spurzheim, by the appointment of the following officers. Viz. Rev. JOHN PIERPONT, President. Dr JONATHAN BARBER, V. Pres., E. P. CLARK, Esq., Treasurer., S. G. HOWE, M. D., Cor. Sec., NAHUM CAPEN, Rec. Sec., JOSIAH F. FLAGG, M. D., WINSLOW LEWIS, M. D., JOSEPH MCKEAN, M. D., and WM. B. FOWLE, Esq., Counsellors.

The operations of the society were introduced by a spirited and valuable discourse from Dr Barber, and a very promising degree of zeal and desire of investigation was manifested by all the members, many of whom have already distinguished themselves in the cultivation of general science, or of some particular department of it.

Mr Thomas M. Smith, whom we accidentally misnamed in our last

number, has commenced a course of Lectures on the anatomy of the Horse which are well attended, and promise to be interesting and instructive.

His Veterinary establishment in Hanover Street is fast becoming known and appreciated by our citizens, and he is already admonished that more extensive accommodations will be necessary. Let him only continue to be studious in the principles of his art, and devoted to a personal application of them in practice, and we can promise him, from the intelligent community in which he has established himself, a degree of respect and patronage corresponding with the valuable services he is capable of rendering them.

Samuel D. Woodward, M. D. has been intrusted with the medical department of the State Lunatic Asylum at Worcester. This institution is now prepared to receive the unfortunate subjects of its charity.

*On the Epizootic Disease at Choisi-le-Roi.** By M. Carrere, late Interne des Hôpitaux. — During the disastrous progress of cholera in Paris, the village of Choisi-le-Roi, while perfectly free from the epidemic, was the scene of an epizootic disease, of which domestic poultry were the only victims. In the history of many other epidemics, we find coincidences of this description, of peculiar diseases affecting the lower animals, while pestilences were decimating mankind. Sometimes horned cattle, at other times horses, have been especially attacked; but there have not been recorded more than two or three examples of epizootics among birds. Chabert and Boronio have, it is true, described some diseases of birds, observed in France and in Lombardy, but the characters of the affections they describe, are totally different from those observed at Choisi.

The cholera had scarcely appeared at Paris, when it was generally reported that a disease of most destructive mortality was raging among the poultry throughout the commune. Here, as at Paris, the cry of "poisoning" was loudly made; all persons who were persuaded that the food and drink of mankind were mixed with poison, found no difficulty in convincing themselves that similar villany was practised in the poultry yards. But the mortality soon reached such a pitch, that this idea was abandoned, and then it was generally reported, that the cholera was the cause of the epizootic.

Wishing to arrive at the source of these rumours, I learned, that since the 3d of April, a vast number of fowls had perished in several houses situated in different quarters of the hamlet. During the first days of the disease, the number of deaths had been very considerable, after which period, the birds were killed by the owners on the occurrence of the first symptoms. In one fowl-yard, of eighty cases, one or two alone recovered. Many remedies, amongst others bleeding under the wings, had been in vain resorted to. *A considerable quantity of the diseased fowl had been eaten by the inhabitants without any bad effects.*

The causes of this malady appear to me altogether unknown, and

* Choisi is situated about five miles from Paris on the banks of the Seine. It is considered a remarkably healthy village.

I saw no reason fer supposing it to be contagious. Nevertheless, when a single death occurred in a fowl-yard, the mortality only ceased when it had no more victims to destroy. The most cleanly poultry feeders suffered as severely as the most filthy. The kind of food had no influence on the disease. The fowls at large in the streets of Choisi were attacked with equal severity with those perpetually confined or occupied in incubation. *Rabbits, geese, and ducks, however, lived with impunity in the same yards where the hens were universally perishing, and three turkeys only were affected.*

The disease, generally speaking, commenced in the morning. The hens were noticed to be dull and weak, their wings drooping, and their crops distended with undigested food. In a few cases the disease commenced during the day, and lasted four-and-twenty hours. The respiration was short and hurried, the motions of the heart accelerated, and diminished in force in proportion to their increase in velocity. In almost every instance there had been numerous whitish, liquid dejections. The gullet was distended with thready mucus, which escaped from the beak. The combs were of a lived red color, and often deepened to a violet as death drew near. After the disease had lasted from two to five hours, convulsions usually finished the sufferings of the animal, and death was rapid in proportion to the quantity of the evacuations. In many cases I have learned, that the coldness of the sick birds was very remarkable. A few recoveries were noticed towards the termination of the epizootic. As far as I can find out, about five hundred fowls died of the disease, or were killed in consequence of the development of its symptoms.

After death, the color of the skin was the same as in fowls strangled without being bled. The bodies were warm for at least three hours, and the cadaveric rigidity was very remarkable.

I have taken much pains in seeking for any pathological alterations which might explain the cause of the disease, but my research was quite in vain. The brain was white, and free from congestion. The heart was bloodless, and of its usual consistence. The aorta contained fluid blood. The lungs were rosy and crepitating. The mucous membrane of the œsophagus frequently showed little papillæ, surmounted here and there with a white point, like a minute grain of sand, adhering to the centre of the papilla. The crop always contained food; the gizzard was strongly contracted; the intestine presented occasional reddish patches, especially in the situations where little parcels of worms were found. The liver was gorged with black and tarry blood; the gall-bladder distended with thick green bile.

This epizootic is quite different from the "*maladie charbonneuse*" of Chabert, and from that described by Boronio. Neither has it any analogy to the "pip," for the tongue was always in a natural state. — *Journal Hebdomadaire.*

COLLECTANEA.

Age.

So intimately are all the functions of the animal economy linked together in one harmonious system, that a change made in any one of them must necessarily affect all the others, by disturbing the nice balance which is established by nature between them. Hence the difficulty that must always be felt in tracing to their origin the long and complicated series of changes that constitute any considerable alteration in the state of the system: and when, as in the present case, the inquiry relates to alterations that are extremely gradual, and extend over considerable periods of time, we are still less likely to arrive at any certain conclusion. Thus, after prosecuting our induction of facts to the length of establishing certain leading principles, according to which the slow progress of years affects the different organs and functions of the body, we find great difficulty in proceeding farther in their generalization, and in reducing them to a single principle. We have seen, for example, that a great number of changes occurring in the body by the lapse of years imply the operation of a general consolidating cause, affecting both the solids and fluids, and exerted especially on the cellular and membranous textures, which appear to be primarily acted upon, and through which all the parts into which the cellular texture enters as a principal component part, become also more and more condensed as age advances. The gradual diminution of the energy of circulation, and the obliteration of the minuter vessels, constitute together another general fact, which includes a large proportion of the phenomena characterizing the transitions from the earlier to the later stages of life. Now it may be proposed as a question whether these two causes, while they act conjointly, act also independently of one another; or whether the one is not an intimate and necessary consequence of the other. Is the closing of the capillary arteries, it may be asked, the effect of the tendency which the animal fibre has to progressive condensation; or is not this condensation the effect, rather than the cause, of the diminished impetus of the circulating fluids incident to age? Again, if we admit this last hypothesis to be the true one, then we have still farther to seek for the cause of this diminution of force in the circulating fluids: and this brings us to another step in the investigation, namely, the inquiry into the changes which

take place, in the progress of life, in the muscular and nervous powers.

The muscles are found to undergo, in the course of years, changes as considerable, though perhaps not so obvious, as the other textures. They participate in the condensation incident to the cellular texture that enters so largely into their composition, and which, as has already been pointed out, frequently acquire, by the deposition of fibrous or even osseous matter, the density of tendon or of bone. This excess of density in the cellular membrane, that invests the muscular fibres, is itself an impediment to the free contraction of those fibres, which are, therefore, from this cause, performed more slowly. But independently of this, a change also takes place in the muscular fibres themselves: they become more rigid, and the total size of the muscle is diminished. Its contractility is also impaired; so that it is less readily as well as less powerfully influenced by stimuli. The muscles of voluntary motion are less under the control of the will; and the involuntary muscles execute their functions with diminished energy.

Not only is the irritability of the muscle impaired, but also that property which has been denominated its *tone* is diminished. The texture of the muscles of elderly persons is loose, flabby, and relaxed: this flaccidity is perceived more especially in the thick muscles of the lower extremities, as the glutæi, the solæi, the gastrocnemii, and biceps muscles; while, at the same time, the individual fibres of those muscles are, in themselves, tough and dense. A greater degree of vacillation characterizes the actions of the muscles of the limbs in advanced age. Hence the tottering and uncertain gait of the infirm old man. Bichat observes that this irregular action of the muscles is generally accompanied by a deterioration of their substance, indicated by greater paleness, and the assumption of a light yellow color, as if an approach was made to their conversion into sebaceous matter. He remarks that this change is more commonly observed to take place in the deep-seated muscles of the back, which occupy the longitudinal spaces between the processes of the vertebræ; and that it does not affect the muscular system generally, but only a small number of isolated muscles.* The same phenomenon has been noticed in muscles that had long been affected with paralysis.

The prevailing diminution of muscular strength is manifested, very unequivocally, in the affection of the voice, which in old age, becomes shrill and tremulous; and the

> "Big manly voice,
> Turning again towards childish treble, pipes
> And whistles in his sound.

* *Bichat.* Anatomie Générale, tom. iii. p. 336.

A diminution of tone is also exhibited in the muscular coats of the alimentary canal; the stomach and intestines are habitually more dilated; that is, they do not so readily contract upon their contents, when but little is contained in them. The same is the case with the bladder, which remains large, even when void of urine. The diminution of power in the muscular fibres of the bladder is productive of a double evil; as it is rendered less capable of retaining the urine when distended, and also less capable of completely emptying itself. Together with this want of power, the bladder often gets irritable in advanced life; and to this increased irritability the enlargement of the prostrate often contributes, by impeding the action of the sphincter, and lessening the diameter of the canal of the urethra.

But muscular contractility is itself intimately connected with the condition of the nervous system; and before we can form a proper estimate of the causes that occasion the decline of the muscular powers, we must take into consideration those that affect, in corresponding periods, the nervous powers.

The structure and composition of the brain undergo, by the progress of age, changes no less great and important than those that affect other parts. The substance of this organ, at the time of birth, is almost fluid; so that, when taken out of the cranium, it has hardly sufficient consistence to retain its figure. As the body grows, it acquires greater consistence and firmness; in the same proportion, we may observe that a smaller quantity of blood circulates in its vessels. In the progress of life this condensation still proceeds, and the subdivisions of that organ are more distinctly marked; hence, in advanced age, the brain becomes better adapted for the anatomical study of its minuter parts. The distinction of color between its medullary and cortical portions is more strongly marked, and is particularly visible in the optic thalami, the corpora striata, the cornua ammonis, and in that portion of the lower part of the third ventricle which gives origin to the peduncle of the pituitary gland.

An alteration also takes place in the chemical properties of the substance of the brain; Bichat remarks that chemical re-agents act more slowly upon the brain of the adult than upon that of an infant. This is more particularly the case with the dissolving power of alkalis, which is much less in the former than in the latter. The blood-vessels and membranes of the brain become more tough and rigid, and are often incrusted with osseous deposits. The dura mater is easily detached from the inner surface of the skull, in consequence of the obliteration of most of the vessels that established a connexion between them. It is only at the sutures that it remains attached: and even there the connexion becomes less firm as the sutures become themselves obliterated by the progress of ossification. The pia mater and tuni-

ca arachnoides acquire greater thickness; and the former presents a redder appearance than formerly; a circumstance which offers a marked contrast with the diminished quantity of blood in the sinuses and neighboring parts. In general the whole mass of brain is diminished in size in advanced age, so that it does not completely fill the cavity of the cranium. Sometimes, indeed, a contrary change to that above described is observed to take place, the brain of very aged persons being found in a softer and more flaccid state than in the adult; but this should be considered rather as a diseased state than the natural effect of age.

The nerves undergo changes from age very analogous to those of the brain; though, perhaps, less distinguishable, in consequence of the membranous covering with which each of their filaments is invested. The proportion of nervous matter appears to be diminished; as is certainly the case with the number and size of their blood-vessels. The ganglions connected with the nerves become harder, and of a deeper gray color, and shrink considerably in their size.

The functions of the several parts of the nervous system are, doubtless, dependent on their organization; but no knowledge we have been able to obtain of the nature of that organization from anatomical inquiry, or from any other mode of investigation, has thrown any light whatever on the mode in which these functions are conducted. We cannot, therefore, predict, except in the most general way, what modifications of function will result from any observed alteration of structure on this system. All the knowledge we can attain of this subject must be derived from direct observation, and from induction of the facts so obtained. Now, the whole series of phenomena that characterize the decline of life, indicate the gradual diminution of the energy of the nervous system in general, and of the brain more especially. All the sensitive functions are performed less perfectly. The organs of the external senses become less capable of receiving impressions from their respective objects; the nerves transmit more tardily and more feebly these impressions to the brain; and the perceptions to which the transmitted impressions give rise are less vivid and more transitory than formerly.

The sensibility of the system generally is diminished by age. Bodily sufferings, from the same causes, are less acute; and equal injuries excite less constitutional disturbance; inflammation is more languid. Painful affections, such as cancer, are felt less acutely in age than in the meridian of life, and these as well as all other diseases, have a disposition to assume a more chronic character. The system is less susceptible of the action of contagions of all kinds; and if, by a certain age, it has not gone through the usual course of exanthemata, and other diseases which affect the body only once in the course of life, it generally escapes them altogether.

The temperature of the body is probably lower in age than in youth. An explanation of this fact has been sought for in the diminution of the quantity of fat, which, by its non-conducting properties, prevents the escape of heat from the body: but it seems more reasonable to account for it by the decline of the powers both of the circulation and of the nervous energy in general. Whatever be the cause, chilliness is a very common attendant on old age. It might, perhaps, be concluded, from reasoning *à priori* on the facts already stated, that the more easy exhaustion of the sensitive powers would call for a greater proportion of sleep, in order to restore and maintain them. Yet we find, in reality, that old persons sleep less than those that are young, and that their sleep is much less profound, and oftener disturbed by dreams. Probably, the explanation may be found in that law of the economy which appears to regulate the quantity of sleep by the necessity that exists for nutrition. Thus, when the body is growing, as in young children, sixteen hours out of four-and-twenty are passed in sleep. Adults sleep, on an average, seven or eight hours; but for the aged, five or six hours are generally sufficient. Many exceptions, indeed, occur to this, as well as to every other rule, in which the operations of the nervous system are concerned; and especially in those depending so much upon habit, which is justly esteemed a second nature. Persons of great age sometimes experience very distressing wakefulness; this is often the effect of cold feet, indigestion, or other internal sources of irritation.

The mind, as well as the body, is wasted by time. The first indication of diminished vigor in the intellectual faculties is usually the decay of the memory. The power of recollection, which is immediately dependent upon that of association, appears to have a closer relation to the physical condition of the *sensorium*, than any other of the mental faculties: for we often observe a failure of memory, while the judgment continues unimpaired. This loss of power is chiefly felt in the case of new associations. Thus recent events are recalled with much greater difficulty than old ones; and new habits can hardly ever be contracted. The earliest notice that is given of this partial decline of the faculties is generally in the forgetfulness of the names of persons. When carried somewhat farther, the names of things are with difficulty recollected. The mind loses that command of language which it formerly possessed; hence the tardiness of speech, and heaviness of expression which characterize the conversation of so many persons of advanced age. The garrulity of old persons is also frequently a consequence of the deficiency of memory, which effaces the recollection of what has just been said, and leads to continual reiteration of the same ideas.

Not only are the bodily feelings impaired by age; the mental

sensibility is also blunted, in at least an equal degree, in all that relates to present or recent impressions. Yet it has often been remarked that old persons feel acutely the loss of former friends and companions. How often do we witness the survivor of an aged couple soon follow his partner to the tomb. The failure of the sight, of the hearing, the senses which connect us most largely with the external world, contribute much to the diminished exercise of the intellect, by abstracting the occasions for exertion; and we well know that, without exercise, the intellectual as well as the bodily powers stagnate and become torpid. To this cause are often added impediments to bodily exertion arising from rigidity of the membranes, stiffness of the joints, debility of muscles, and impaired nervous energy. The tottering steps and tardy movements of the infirm old man can be accompanied with none of the enjoyment which attends the exertions of limbs animated by the elastic spring of youth. If, under these circumstances, he should unfortunately be deprived of the resources of mental cultivation, can we wonder that he is driven for refuge to the enjoyment of those senses of taste and smell that yet remain; and that he devotes himself to the cultivation of the pleasures of the table, and the artifical excitation of spirituous liquors? Yet even here nature imposes certain limits, beyond which the votaries of luxury are forbidden to pass.

> "Time hovers o'er impatient to destroy,
> And closes all the avenues of joy.
> In vain their gifts the bounteous seasons pour,
> The fruit autumnal, and the vernal shower;
> With listless eyes the dotard views the store,
> He views, and wonders that they please no more.
> Now pall the tasteless meats and joyless wines,
> And luxury with sighs her slave resigns."

Need we pursue this "strange eventful history" to the last melancholy chapter of man's existence, and contemplate the wreck of those exalted faculties which ennoble his nature, and of which the deprivation lowers his condition far beneath that of the beasts of the field? Need we dwell upon the sickening spectacle of "second childishness and mere oblivion;" and disclose those mournful contrarieties of our nature, that drew forth the exclamation from the poet —

> "In life's last scene what prodigies surprise?
> Tears of the brave and follies of the wise.
> From Marlborough's eyes the streams of dotage flow,
> And Swift expires a driveller and a shrew."

Let us rather draw a veil over this humiliating picture of the frailties incident to humanity, and which forcibly remind us of what

> "We shun to know,
> That life protracted, is protracted wo."

To revert, then, to the philosophical question which has already occupied our attention, let us inquire whether it is possible, throughout the multifarious changes we have described as characterizing the several stages of the transition from infancy to decrepitude, to discover the uniform and progressive operation of any single principle. Admitting that the increasing density of the cellular substance is the natural consequence of the diminished force of circulation, aided, perhaps, by the increased, or at least, undiminished power of absorption, may we not advance a step farther, and ascribe the diminution of the force of circulation to the gradual loss of muscular power arising from a decline in the energies of the nervous system? If this be a legitimate inference, then this declension of nervous power, which takes place with more or less rapidity as we advance in life, appears to be the general principle we were in quest of; that is, the ultimate fact to which all others are subordinate. Appearances, then, warrant the hypothesis that a certain stock of vital force is imparted to the embryo at its first formation, as a provision for carrying it through its destined career of existence. In every action of the system a portion of this power is expended; and the greater the expenditure, the less must there be remaining, till, at length, the whole being consumed, all movements cease, like those of a watch which has run down, and of which the mainspring has ceased to act.

That considerable differences exist in the stock of vitality originally imparted to the frame in different individuals, cannot be doubted; some being destined to a shorter, and others to a longer, term of existence, independently of all adventitious causes that may occur to disturb the regular course of nature in the demolition of the fabric, and the termination of life; while others, born with more feeble stamina, yet highly excitable, anticipate the natural epochs and stages of life, and, precocious in their youth, are doomed to premature senility and decay. Such is usually the condition of dwarfs, who generally die at an early period, bearing all the ordinary marks of extreme old age.

From all that has been said we may draw the conclusion, that the spontaneous decay of the body, and decline of its powers, invariably attending the lapse of years, arise altogether from causes that are internal, and interwoven with the very conditions and laws of its existence, and are but little influenced by external circumstances. With inorganic bodies, precisely the reverse takes place; they owe to external causes their decomposition and destruction. But living bodies perish from within, being consumed by the very fire which is itself the source of their animation.

If health be viewed as consisting in the proper balance and

harmony of all the functions of life, it is evident that this condition may exist in all ages, and that it is compatible with different degrees of energy in the exercise of those functions. Though the powers of the constitution may be enfeebled by age, and though the actions may be less vigorously performed, yet if they be duly proportioned to one another, the system must be considered as in a healthy condition, and as fulfilling the designs of nature in the latter stages of its existence. In one respect, however, there is a material difference between the health of youth and the health of age; inasmuch as the former is more secure and stable than the latter. In the period of youth, it is true, the greater activity of the functions often endangers the equilibrium of the system: but then the power of restoration is at the same time proportionably more efficient. Rich in its resources, the constitution of youth rebounds with surprising elasticity from the depression of a severe illness, and even seems to gather fresh vigor from the shock. In advanced life, on the contrary, this resilient power is deficient: the fibres that have been stretched beyond the proper limits no longer return to their former state; the spring no longer re-acts with a force equal to that by which it is extended; and a displacement of its particles is productive of a permanent alteration of structure, and of augmented incapacity to perform the same extent of action.

The slighter deviations from the perfectly healthy structure of the organs, which are the concomitants of age, are of various kinds, and their effects may be for a long time insensible. Gradually, however, they increase in extent, until they manifest themselves by some outward indications of disordered health; obscure, perhaps, at first, and apparently evanescent; yet, recurring at uncertain intervals, and acquiring, by degrees, a more decided and permanent character, they at length attract attention; and proper means being resorted to for the correction of the derangement in the functions, the health appears to be again restored.

Still, however, there is left a greater proneness to disorder than before. Various excitements and exertions which formerly were harmless are not so well borne. Slighter causes of disturbance are followed by some particular symptom or sets of symptoms to which there may exist a predisposition in the system; such as head-ache, lassitude, dyspepsia, depression of spirits, palpitation, watchfulness, &c. It seems as if something were going wrong, and preparing more serious illness. Such is generally the progress of structural diseases, which steal on by slow and insidious gradations, producing for a certain interval that undefinable state of impending disorder, which only a very attentive and scrutinizing observation can detect, but which exists long before that eventful period commonly characterized as the *breaking up of the constitution*, or that in which positive disease has com-

menced its hostile incursions. Then, indeed, all that our most skilfully directed efforts can accomplish is to repulse the immediate aggression, and obtain a truce from that enemy which is sure to renew the attack, and to whose power the citadel we defend must at last be unconditionally surrendered.

It has been observed that, independently of any positive alteration in the structure of a particular organ, there occasionally occurs, at a certain period of life, a sudden and general alteration of health, which is of uncertain duration, though generally of no long continuance, and to which the term *climacteric disease* has been applied. This peculiar condition has been well described by Sir Henry Halford in an essay published in the Medical Transactions of the College of Physicians.* This disease, he observes, is better characterized in men than in women ; but even in the former the period of its invasion is by no means constant, for it may occur at any time between the ages of fifty and seventyfive. Its commencement is often apparently determined by some occasion of feverish excitement, such as an act of intemperance, a fall which seemed at the moment to be of no consequence, or even a common cold. Sometimes it follows upon a marriage contracted late in life. But the most frequent predisposing cause is mental anxiety and suffering, the corroding influence of which will eventually sap the foundations of the most robust constitution.

The climacteric disease is described, by Sir Henry Halford, as being marked by an extraordinary alteration in the expression of the countenance, by an accelerated pulse, and by a wasting of the flesh, without any obvious source of exhaustion. Wandering pains are felt in the head and chest; the tongue is white, the bowels are sluggish, the nights passed either without sleep, or without the refreshment which sleep should bring with it, and there is a general feeling of lassitude and of fever. There is no deficiency of urine ; yet the legs often swell. These symptoms may be of some duration ; and may, indeed, proceed so far as to undermine the health to such a degree, that the patient sinks under a disease which seems to have no other characteristic than that of a general failure of the functions. But when, as is most frequently the case, the powers of the system are adequate to recovery, the symptoms are gradually mitigated and disappear. Then is there a return of comparative health and strength, which may last for many years. But we may yet always remark that the energies of the frame have been permanently impaired ; and the impression made upon the countenance remains fixed and indelible.

Such is the climacteric disease in its simple form, as it occurs

* Vol. iv. p. 316.

in individuals who have enjoyed previous health. But when it supervenes upon a frame already deranged by habitual illness, it often assumes the features and partakes of the character of the predominant complaint. When thus associated with the effects of structural disorder, it is always difficult to assign the share that belongs to each specific source of disease; but the existence of the climacteric affection may sometimes be inferred from the peculiar expression of the countenance already mentioned, from the unusual exasperation of the symptoms appertaining to the organic disease, and from its proceeding with greater rapidity to a fatal termination. It is owing to this frequent complication of previous local and constitutional ailments, with the evils which are the natural consequences of old age, that the picture above drawn is not often realized in actual observation.

We shall now proceed to point out the more specific diseases to which old age is most obnoxious, and by which life, at that period, is most frequently terminated.

Among the numerous indications of a wavering in the equilibrium of the functions incident to the decline of life, perhaps the most important are the symptoms of disorder in the digestive processes. Dyspepsia, in all its varieties, is among the earliest as well as most common of the diseases of advanced life; and its prevalence at this period may be traced to many causes, of which the operation is sufficiently obvious. The principal of these is, undoubtedly, the gradual decline of irritability and of muscular power which prevades the whole system, and in which the fibres of the stomach and intestines must of course participate. It often happens, that while the powers of assimilation have diminished, the appetite still continues good; and, consequently, more food is taken than can be converted into healthy nutriment. That portion which is imperfectly digested being retained, tends, by its presence and accumulation, still further to impede the due performance of this function. The distension of the stomach and bowels from flatus, and their continued irritation from containing acid or acrid materials, lay the foundation of a vitiated habit, and of permanent injury to the tone of the organs. Another cause of imperfect digestion may be pointed out in the loss of the teeth, and the consequent defective mastication of the food. The mischief is often aggravated by the sudden discontinuance of the salutary exercise which was formerly taken; and by an indulgence in the repose which, after a life of exertion, is almost claimed as the privilege of age.

Increasing sluggishness takes place in the peristaltic action of the bowels, more especially if exercise be neglected. Hence arises a habit of costiveness, and hence are formed accumulations in the large intestines, and more particularly in the cells and flexures of the colon, which acquire a preternatural size from

habitual and inordinate distension. In this way the foundation is often laid for structural diseases, which affect the coats, and lead to fatal strictures of the great intestines.

Another and more frequent attendant upon habitual constipation are hemorrhoidal tumors, often productive of much suffering, or profuse and dangerous losses of blood; and leading, not unfrequently, to fistulous abscesses, which terminate in a lingering and fatal hectic.

Protracted dyspepsia may give rise to hepatic disease in all its various forms. The cause by which these affections are most commonly determined, is the abuse of spirituous liquors. If the habit of indulgence in this Promethean poison has been already contracted, it is almost certain so increase during age, when the cravings of this artificial appetite never fail to become more inexorable, and when the power of self control, together with the other energies of the mind, is generally diminished. Yet, provided a foundation has not been laid for diseases of the liver at former periods of life, either from the cause just mentioned, or from the influence of a hot climate, it does not appear that there exists any particular proneness to this class of diseases in advanced life.

The structural diseases of the liver, like those of other organs, are mostly of a chronic character, stealing on by slow degrees; advancing to a certain point with comparative rapidity; then appearing for a long interval to be stationary; after which they proceed another step, and again stop. As a considerable portion of life may be spent while they are thus passing through their successive steps of aggravation, it is natural to expect that their last and more fatal stage should occur during the later periods of life, and thus appear as the natural attendants upon old age. One cause, however, may be assigned for the more aggravated symptoms, and more rapid course of structural diseases in advanced life; and that is, the greater proneness to chronic inflammation at that period, which may itself be traced to a deficiency of that conservative power which maintains the healthy balance of the circulation. This more diffused and insidious kind of inflammatory action is particularly apt to affect the serous membranes. Hence the aged are particularly liable to those dropsical affections which are the natural consequences of their inflammatory states. The same general principle will account for the ravages of cancer being more observable in the aged than in others. We find accordingly that a large proportion of elderly females are destroyed by cancer of the uterus or mamma; while, in the male sex, the structural disease which more especially manifests itself in advanced life is the enlargement and scirrous induration of the prostrate gland, and especially of its posterior

lobe. This latter disease, besides being productive of various local inconveniences, such as irritation of the bladder, and painful obstructions of urine, frequently preys upon the general health, and tends to exhaust the constitution.

The failure of the urinary functions is also among the more frequent causes of distress in old persons of the male sex. The first indication of a tendency to gravel is the deposition of uric acid in the form of crystals, like red sand, in the urine. By degrees concretions are formed in the pelvis of the kidney, giving rise to acute pain, and other nephritic symptoms arising from inflammation and abscesses in the kidneys. When these concretions descend into the bladder, the well known symptoms of vesical calculus are excited, which need not be enumerated in this place. But independently of calculus, the muscular power of the bladder is liable to be much impaired in advanced life, in a greater proportion than other muscular parts. Two evils, apparently of an opposite kind, yet both referable to impaired action of some of the fibres of the bladder, occur as sources of great inconvenience and distress. The one is retention of urine, from debility of those muscular fibres by which it is expelled; and the other is the incontinence of the bladder, arising from paralysis of its sphincter.

The first indication of a failure in the muscular powers of the bladder is the inability to empty itself wholly; some urine always remaining behind, after every attempt at expulsion. If from some accidental circumstance the urine has been suffered to accumulate in too great a quantity, its expulsion becomes still more difficult, and may even be found to be impossible, without the introduction of the catheter. After the bladder has been stretched to an excessive degree, its tone is much impaired, and is with difficulty recovered; and even if the power of retention, to a certain extent, is obtained, this power may be accompanied by incontinence when that quantity is exceeded, the urine continuing to come away involuntarily, while there is still a considerable quantity retained in the bladder.

Gout, though it be not exclusively a disease of age, should be ranked among those to which there is a greater predisposition in the decline of life. Chronic rheumatism, and especially that form of it which has been termed nodosity of the joints, is more prevalent in aged persons than in others.

The organ which participates most largely in the changes induced by age, and which also sympathizes most extensively with the stomach, is the brain; and the diseases of this organ probably constitute, on the whole, the principal source of fatality at the advanced period of which we are treating. The failure of energy in its functions frequently shows itself in the alteration which takes place in the state of mind; in the predominance of

more gloomy views of things, in habitual despondency, in increasing listlessness and lethargy, in confusion of thought or loss of memory, in heaviness and somnolency. Old persons are subject to noises in the ears, to occasional head-ache, and giddiness. Partial debility is manifest in some particular organ of sense or motion; the sight or hearing fails; a feeling of numbness, or tingling, is perceived in the extremities; wandering pains are complained of in different parts of the trunk or limbs, which are ascribed to rheumatism, but which are found to follow more the course of the nerves than of the muscles, and are sometimes referred to the centre of the bones. Sudden and unexpected relief is often experienced from these symptoms by the discharge of flatus from the stomach or intestines.

All these are but preludes to an attack of a more serious character. Palsy or apoplexy suddenly supervenes, and either at once carries off the patient, or, if for a time recovered from, leaves him but the wreck of his former self. It has been computed that about one fourth of all those persons who attain the age of seventy are destined to perish by this disease. It would appear, from a computation made by Dr Heberden, that apoplexy and palsy have prevailed to a greater extent in modern times than formerly; for the number of fatal cases from these diseases, recorded in the Bills of Mortality, is now double of what it was at the beginning of the last century.

This is not the place to enlarge upon the causes, both remote and proximate, of that class of diseases; it will be sufficient to observe that they appear connected with a local plethoric state of the vessels of the head, and more especially of those belonging to the venous system, in conjunction with the declension of the nervous power. In a large proportion of cases they are accompanied with perceptible structural changes either in the cerebral substance, or in the vessels that supply it. Ossific depositions in the coats of the arteries of the brain are among the most frequent of these changes.

Various lesser degrees of impaired sensibility and muscular energy, occasionally perceptible in different organs, and constituting what is called partial paralysis, are referable to the same causes. Instances occur, in the relaxation of the upper eye-lid, which, in consequence, hangs over the globe of the eye; in the dropping of the under lip, which becomes pendulous, and is no longer able to retain the saliva; in the faltering speech and tremulous voice, and in the relaxation of the sphincter, already noticed.

Cutaneous disorders frequently make their appearance during the decline of life. They would seem in general to be more closely connected with the condition of the brain and nervous system, than with the state of the digestive organs. Of these the

most distressing and intractable is the prurigo senilis, which, though unattended with any visible eruption, is often remarkably inveterate, and is the source of incessant and indescribable torment to the individual whom it affects.

The heart is frequently found to be diseased in elderly persons; hence arises another train of diseases, which will be described in their proper place. It will be sufficient here to indicate ossification of the coronary vessels, or of the valves of the heart; increased size of its ventricles or auricles, and dilatation of their cavities; aneurisms or ossification of the coats of the large vessels connected with the heart. Collections of water in the pericardium, the frequent effect of these organic changes, contribute still further to complicate the symptoms and augment the danger to life. All these occasion more or less impediment to the action of the heart; and the consequent disturbance of the circulation shows itself in various ways.

Inflammation in the skin, particularly in the extremities, is exceedingly apt to terminate in mortification during old age. The toes are frequently the seat of this affection. Carbuncle may also be enumerated among the diseases to which there is a more particular disposition in the advanced than in early or middle periods of life.

The last class of diseases affecting aged persons, which we shall notice in this brief review, are those of the respiratory organs. The relaxed condition of the mucous membrane of the bronchi, and the predisposition to a chronic form of inflammation, lay the foundation for those protracted forms of catarrh, of asthma, and of peripneumony, which prevail so extensively in persons of advanced age. In catarrhus senilis, as it is emphatically called, the great abundance of the secretion from the membrane both of the lungs and nasal cavities, and its peculiar viscidity, which demands great efforts for its removal, is the source not only of great distress, but also of great exhaustion of strength; the constitution is frequently unable to withstand the repeated aggravations of this complaint, which take place in successive winters. Under these circumstances, especially, the supervention of peripneumonia notha is rapidly destructive of life. The occurrence of that species of epidemic catarrh, at times so widely prevalent, and which is known by the name of influenza, is always extensively fatal to very elderly persons: indeed, all inflammatory complaints affecting the chest are incomparably more dangerous at this period of life. Asthma, which must certainly be enumerated among the diseases of age, is not, at first, or in itself, attended with the same risk; though in its consequences, it eventually contributes to the abridgment of those years during which the life of a person of healthy lungs would otherwise have been prolonged. P. M. Roget.

Auscultation.

[The following remarks are found among some valuable reports on inflammatory diseases of the lungs, by Dr O'Brien, a distinguished physician in Dublin.]

"With respect to the stethoscope, highly ingenious as the application and discovery of this instrument certainly are, yet we fear that Laennec attached too much importance to it as a means of diagnosis, and that in laboring to elevate his favorite discovery to the dignity of a science, he has occasionally deviated into the regions of fancy, and been indebted to the fugitive creations of that active faculty, for *some at least*, of those acoustic phenomena which he represents as permanent and infallible diagnostic signs.

"From the works of an eminent and able living writer of the present day, *(Dr Boisseau,)* whose writings prove him to be perfectly qualified to pronounce an opinion on the subject, and whose evidence will hardly be accused of prejudice on a question where national feeling is apt to interfere in behalf of national discovery, the author extracts the following remarks on the stethoscope.

"'When Laennec first exhibited the stethoscope, people expected to be able to read as it were by this instrument what passed in the chest. A little further observation, however, has taught us that its signs are obscure, uncertain, and not to be depended on without the symptoms. In phthisis this instrument is incapable of discovering tubercles until they become hollow cavities, when their discovery is of little use. The pathognomonic stethoscopic signs of phthisis are the cavernous voice and *souffle à l'oreille*, which cannot be heard until the cavity of the tubercle has acquired a considerable magnitude, that is, in fact, until the tubercle has ceased to exist.' — *Nosograph Organ.*

"We have been led into the above remarks by the desire of repressing unreasonable enthusiasm on the one hand, and, on the other, that disingenous system of puffing by which some persons affect, if not to read, at least to hear more than their neighbors by this instrument."

Vapor-Bath.

Forms of the vapor-bath and modes of using it. — In treating of the warm bath it was almost unnecessary to notice the particular forms in which it is administered, as these differ very little from each other, either in their nature or effects on the system. The case is different with the vapor-bath; there being several modes of applying this, which are productive of results respectively different.

There are two principal forms of this bath: — 1. The free or

public vapor-bath, steam-chamber or humid stove, bagnio, Russian or Oriental bath. 2. The confined or solitary vapor-bath, such as is commonly used in this country.

1. The free or Russian bath consists of a close room filled with vapor, in which the patient may move about at pleasure, and where many persons may bathe in concert. The chamber is commonly of considerable dimensions, and is arranged somewhat in the manner of a theatre, with benches rising one above another. In the Russian and German baths the vapor is produced within the apartment by throwing water from time to time upon red hot stones, heated by a furnace underneath. By this process the whole room is soon filled with vapor, heated to a temperature varying from 112 to 160 or 180 deg. the heat, owing to the diminished gravity of the air, being progressively greater with the elevation of the benches. In the best arranged establishments there are various other apartments connected with the bathing-chamber. The bathers first enter an ante-room, not containing any vapor, but heated to the temperature of from 75 to 90 deg., where they take off their ordinary clothing, put on a proper dress and then enter the bath. On first commencing the use of the bath, the patient commonly remains on the lower benches, where the temperature varies from 112 to 120 deg. At the successive visits he progressively ascends the benches until the temperature is 130 to 140 deg. During the bath it is customary so rub the body with soap-suds, wheaten-bran, &c, or to have it gently beaten with small leafy twigs. It is also common to apply a cloth, dipped in cold water, to the head or face, or to have cold water thrown on the head or some part of the body, from time to time, by means of a douche-tube, the water being applied either in an undivided stream, or in the form of a small partial shower-bath. Having remained the requisite time, the bather descends from the upper benches, and after a short stay in this lower temperature he retires to another room heated with warm air, where, after having dried, he puts on a flannel dress, and lies down on a couch for some time. Frequently, previously to lying down, the patient drinks some warm fluid, and takes other steps to encourage perspiration. He then returns to the ante-room, where it is customary to remain a short time after being dressed, in order that he may be somewhat cooled before going into the open air.

2. The confined or solitary vapor-bath is that in general use in this country. The distinctive character of this is that the patient is restrained from locomotion, being confined in a small close cell or tent of cloth, containing the vapor.

This form of bath admits of three modifications: *a.* the head of the patient being included in the apparatus, so that respiration is restricted to the air in which the vapor is suspended; *b.* the head, or at least the mouth, not being included in the apparatus,

so that the patient breathes the common air of the apartment; *c.* the apparatus being so arranged as to admit of the patient breathing either the vapor of the bath or the external air at pleasure.

The vapor-bath, as generally used in this country, scarcely requires description. It consists essentially of a small frame of wood surrounded by a woollen or other cloth impervious to vapor, inclosing a space little more than sufficient to contain the body of the patient seated on a stool in the centre of it. The vapor is admitted at the lower part of the apparatus by means of a tube connected with a vessel of boiling water. The more common modification of the bath used in this country is that which permits the patient to breathe the air or vapor at pleasure, by excluding or including the head through an opening in the side of the covering. Fixed baths of this kind are now common at all our watering-places, and in most of the large towns in the kingdom; and there are several varieties of the apparatus of a portable kind equally effective. The best of these are the modifications introduced by Captain Jekyll, Mr Green, and Dr Gibney of Brighton.*

General effects of the vapor-bath. — As the principal effects produced by both the vapor and warm-water bath depend, in a great measure, on the same cause, namely, the application of heat and moisture to the surface of the body, it is obviously unnecessary to enter on a detail of all the consequences resulting from the use of the vapor-bath, as this would be to repeat, in a considerable degree, what has been already described. Our object will be sufficiently gained by stating, in this place, the chief *differences* which exist between the operation of the vapor-bath and the warm-water bath. These have chiefly reference to the bath as a medium of communicating heat, and as influencing the functions of the skin and lungs.

* Many substitutes for these more elaborate contrivances have been suggested, and may be extemporaneously employed with sufficient effect when such are not at hand. A thick blanket or two thrown round a drying skreen, or other frame of wood, and placed over a steam-tube connected with a common kettle, answers the purpose very well. The common slipper-bath may also be used for the same purpose, the patient being guarded from the sides of the bath by a covering of flannel, and the mouth of the bath being closed by a blanket placed round the patient's neck; the steam being admitted through an opening in the lower part of the apparatus. Perhaps one of the simplest, least expensive, and most convenient forms of the portable vapor-bath consists of a large open wicker basket, like that used by woolstaplers, reversed over the patient and covered with blankets, the patient being previously seated on a small stool or chair placed upon a piece of floorcloth, near the chimney of the apartment. The tube from a small portable steam boiler, placed on the common fire, is introduced along the floor. The basket is so constructed, with a sort of open door at one side, as to admit of the exclusion of the patient's head at pleasure.

The difference in the heating power of different media was formerly referred to when treating of the water-bath as a means of increasing the temperature of the body. It was there stated that the heating power was greatly influenced by the density of the medium, its capacity for caloric, its conducting powers, the relative fixedness of its particles, &c. *Cæteris paribus*, the more intense the degree in which these qualities exist in the medium, the greater is its heating power. The following are the highest temperatures at which the respective liquids could be borne by the hand of the same individual: spirits, 130; oil, 129; water, 123; mercury, 117 deg. As a general bath, water can hardly be borne at the temperature of 120 deg.; Rostan bore it with great inconvenience for half an hour, of the temperature of 115 deg. In the form of vapor, however, this fluid can be employed as a bath at much higher temperatures. The ordinary heat of the Russian or Oriental bagnio is from 120 to 140 deg.; and it is occasionally raised as high as 180 or 190 deg. The same difference of results, as to the relative heating power of water and watery vapor, was observed by Dr Edwards, in his experiments on animals. He could never get frogs to remain alive more than two minutes in water of the temperature of 104 deg., although the head was not immersed; while they survived the same degree of heat in vapor (and breathing it) upwards of five hours. When conveyed by the still rarer medium of air, it is well known that heat can be sustained, without inconvenience, at degrees greatly exceeding the highest now mentioned. In the experiments performed in heated rooms by Drs Fordyce, Blagden, and Dobson, air of a temperature varying from 200 to 260 deg. was borne for a considerable time with perfect impunity. A still higher temperature, viz. 270 deg., had been previously borne by some young women in France, as recorded by Tillet and Duhamel; and yet greater heat has been sustained by others since that time.

In respect of the heating power of watery vapor, an important difference results from the circumstance of its being breathed or not by the patient. The application of the vapor to the lungs tends to increase the animal temperature, not merely by reason of the additional surface thus exposed to the influence of the heating medium, but because such application puts a stop to the cooling process of evaporation constantly going on from the lungs in a dry air. It is extremely difficult to ascertain the exact ratio of the heating powers of water and of vapor in its two different forms of application. Judging, however, from the results of common practice in the different kinds of bathing, and from a pretty extensive examination of the observations and opinions of practical writers, we are disposed to place reliance on the following comparative view as containing as near an approximation to the truth

as can be obtained on such a subject. For reasons of practical convenience we retain the ordinary divisions and titles of the warm-water bath.

	WATER.	VAPOUR.	
		Not breathed.	Breathed.
Tepid Bath .	85° — 92°	96° — 106°	90° — 100°
Warm Bath . .	92° — 98°	106° — 120°	100° — 110°
Hot Bath . .	98° — 106°	120° — 160°	110° — 130°

Independently of its greater power of communicating heat to the body, when extended to the pulmonary surface, the vapor-bath, when so applied, will necessarily exert a very different local influence than when its action is confined to the skin. This difference of effect must always be kept in view in prescribing the remedy in affections of the chest, or in persons predisposed to these.

There is little doubt that at the corresponding degrees of temperature, the vapor-bath occasions a greater degree of cutaneous transudation than the water-bath, a circumstance easily explained by the difference of the two media as physiological agents. We would, however, make one remark here in reference to this point, as it is of practical importance, and this is, that a part of the additional perspiration experienced in the vapor-bath often arises from the disproportionate degree of temperature employed. Much greater latitude is commonly permitted in regulating the heat of the vapor-bath than of the water-bath; and we know that the former is often used at temperatures corresponding with those of the *hot-bath*, when it is intended to be used — and ought to be used — as a *warm-bath*. One of the causes of increased transudation in the vapor-bath arises from the greater accumulation of fluids in the cutaneous and superficial tissues, a necessary physical result of the greater rarity of the medium; and this circumstance, moreover, constitutes the vapor-bath a more powerful derivative, *cæteris paribus*, than the water-bath.*

It is particularly necessary in using the vapor-bath to attend to the actual temperature as indicated by the thermometer; even more so than in the case of the water-bath; the gradual increase

*It is, probably, in this circumstance of the relative amount of superficial compression in the two cases, that we are to find an explanation of a phenomenon frequently experienced in the water-bath, and very rarely in the vapor-bath. We allude to that feeling of præcordial oppression on first entering the bath, which is so distressing to many persons, and which, indeed, occasionally renders this form of bathing impracticable; the sudden retropulsion of the blood from the whole surface of the body upon the heart and lungs giving rise to the feelings of distress alluded to.

being less felt owing to the greater rarity of the medium. And the caution is still more requisite because, in using the vapor-bath, the temperature is gradually raised to the proper degree, after the patient is in the bath.

Medical uses of the vapor-bath. — Generally speaking, the solitary vapor-bath in which the head is not included may be said to be applicable in the same cases as the warm-water bath, and to be productive of similar results. An attentive consideration of the peculiarities of action of the two kinds above noticed will point out the particular cases in which the one is to be preferred to the other. The vapor-bath at the *corresponding (not the same)* degree of temperature must be considered as upon the whole more derivative to the surface, more diaphoretic, and probably less stimulating generally. It seems, however, to have a less soothing effect on the nervous system. This result, in some cases at least, is partly owing to the more constrained and to the upright position in which it is usually taken. The reclining posture used in the solitary water-bath, where no muscular effort is required to keep the body in its position, gives it a decided superiority over the common vapor-bath or large water-baths, in cases of great debility or severe disease. In such cases, however, by a particular contrivance, the vapor may be applied to the patient in bed.

Most of the cases formerly noticed under the head of the warm-bath are equally benefited by the vapor-bath, and some seem more benefited by the latter. We shall only here refer to one of these, namely, the well-known condition of the system which precedes many acute diseases, and which is familiarly known by the name of *a chill*, because it is usually produced by the application of cold. This state often exists for several days before the reaction of disease and fever supervene. It is the usual precursor of acute catarrh or bronchitis, asthma, pneumonia, rheumatism, diarrhœa, or dysentery, &c; in a word, of the numerous class of inflammatory diseases which derive their origin from cold. In most of these cases the vapor-bath is a very effective remedy if administered at the proper time and in the proper manner. The most proper time is the earliest possible after the application of the morbific cause; but the remedy may still be applied with benefit, although with much less effect, at any time previously to the actual establishment of the local inflammation. After this has taken place, or is about to take place, the application of the bath will, in most cases, be more injurious than beneficial. In cases of the kind now under consideration, the vapor-bath, particularly if the vapor is breathed, appears to possess decided advantages over the common warm-water bath. But although fully convinced of the admirable effects likely to result from

this mode of treatment, we cannot consider it as a practice to be had recourse to at the discretion of patients, without medical sanction, as, like all powerful remedies, it is capable of doing harm as well as good. Under proper regulation, we have little doubt that it will in many cases effectually check the morbid process, which, if left to nature, must end in formal disease. The temperature in cases of this kind should not be high. The object being to derive to the surface without exciting the circulation, the application of the vapor should be commenced at the lowest degree which is felt to be agreeable, as about 95 deg., and the temperature should be gradually and slowly raised, and should rarely exceed 106 deg. The more copious the perspiration that can be excited at a moderate degree of heat, the more likely is the result to prove beneficial.

WARM AIR-BATH.

The temporary exposure of the naked body to the air of a common chamber has been termed the *air-bath;* and although it has not often been formally prescribed in disease, it has frequently been had recourse to as a means of relieving slight degrees of feverish restlessness. It was practised and recommended for this purpose by Franklin. The immersion of the body in air of which the temperature has been artificially raised, is a therapeutical mean of much greater power, and has been extensively used as such. This is what is termed the *warm air-bath.* Like the vapor-bath, it is of two kinds, according as the air is breathed or not breathed. Warm-air chambers have been employed on a great scale, as luxuries, by persons in health, and especially by the ancient Romans. They are still occasionally used for medical purposes, but more frequently as appendages to vapor-baths than as distinct baths. The heated air-chamber has, however, formed a frequent medium for experimenters to ascertain the effects of high degrees of heat on the animal body. The experiments of Drs Fordyce, Blagden, and Dobson, in England, of Delaroche and Berger, in France, and of many others, undertaken with this view, were formerly noticed and are well known. We allude to them here only for the purpose of again remarking, that owing to the great rarity of the medium and to the cooling effects of the evaporation produced by the dry air, a very high degree of temperature can be sustained in air with little inconvenience. Much lower temperatures, however, than were borne in these experiments, suffice to produce all the stimulating effects of the ordinary hot-bath, whether of vapor or water. In the experiments of M. Berger and Delaroche in air of a temperature varying from 150 to 190 deg., the following effects are noticed : — A considerable degree of smarting was perceived in different parts of the surface, particularly in the eyes, nose, and nipples ; the superficial veins became universally dilated ; the surface, at first burn-

ing hot, was soon covered with general and very copious perspiration. The temperature of the body was raised several degrees; the pulse rose to 160; the respiration became anxious; and headache, vertigo, and other symptoms of cerebral disorder took place. The above temperatures represent those which correspond with the higher degrees of the hot-water bath. Much lower, therefore, are employed when we wish to produce effects corresponding to those of the warm-water bath.

The warm air-bath is now most commonly used as a solitary bath, the patient not breathing the heated air. By much the most convenient form of the apparatus is that introduced a good many years since by Dr Gower, under the name of the *sudatorium*. This consists merely of a semi-cylindrical frame work of wicker, laid over the patient in bed, and covered with blankets. By means of a metallic tube communicating with the end of the frame, a stream of air, heated by a lamp placed at the extremity of the tube, is directed into the hollow space formed round the patient. The speedy and almost certain effect of this bath is to produce copious general perspiration. It may be used at different temperatures, and be so regulated as to correspond with the divisions adopted in the case of the water and vapor baths. Although, as we have stated, a much greater degree of heat is required in air than in vapor to produce either the elevation of the animal temperature, or the stimulating effects on the system, still it is found, by experience, that a moderate degree of heat is alone necessary to excite copious perspiration. No doubt the sudatory effect is greatly promoted by the rarity of the medium applied to the surface. Dr Gower informs us that he found the most profuse sweating take place when the air was only of the temperature of 85 deg., and he adds that he "had reason to believe that at a much higher degree the effect would be rather frustrated than increased, owing to the ardent heat which the patient feels and complains of, without obtaining the relief which sweating invariably produces." Our own experience with this apparatus does not quite correspond with this statement of Dr Gower. We have, however, found that very copious perspiration may be excited by a temperature not greatly above this, viz. from 90 to 100 deg.; and we are of opinion that even when we use this bath more with the view to stimulate the surface than to excite perspiration, it will seldom be requisite to elevate the temperature beyond 120 deg. or at most 130 deg.*

* The warm air-bath, and its great power in inducing perspiration, were well known to the older practitioners. "Aliud genus balneorum est (says Hoffman) quæ audiunt vaporosa sive Laconica. In his vapores, sive *sicci calidi ex accenso vini spiritu halantes*, sive calidi humidi ex decoctis herbarum cum vino vel aqua surgentes, immediate ad universum corpus vel ad certas duntaxat ipsius partes, admittuntur. Est autem calidorum ejusmodi halituum maxima vis ad eliciendum sudorem, tubulos subcutaneos aperiendos," &c. *F. Hoffmann*, Op. Om. tom. i, p. 465,

The warm air-bath is most analogous in its operation to the vapor-bath; yet it is considerably different from it. It seems to possess all its stimulating qualities without its relaxing and soothing effects. It is, therefore, a much more exciting application at the corresponding temperatures. It appears to be more powerfully derivative to the skin than any other bath, and more certainly productive of perspiration within a short period.

There are three classes of cases in which the warm air-bath seems to be particularly indicated: — 1. in chronic rheumatism and other pains and stiffness, as of the joints; 2. in morbid states of the skin, more particularly in dry scaly eruptions; 3. in acute diseases marked by great exhaustion and retrocession of blood from the superficial parts of the body, as in certain forms of fever, and in the malignant or spasmodic cholera. In the last-mentioned diseases, (which alone we shall notice in this place,) and in others of the same class, the warm air-bath, employed on Dr Gower's plan, has great advantages over all other kinds of baths, inasmuch as its effects on the system are as powerful, while its application can be made without trouble or inconvenience, and without any risk of yet farther exhausting the patient.

This bath was occasionally used by the late Dr Armstrong in that form of fever which he termed *congestive*. The following brief extract from his lectures will point out the cases in which he recommended it, and the fortunate results which he obtained from its employment. "The whole surface is chilly; the blood has retreated from the surface, and has been accumulated in some internal organ, where it undergoes almost a complete stagnation, or at least produces a complete interruption of the venous circulation. A derangement of the functions of that part is the result, and, if that part be important, of the functions of the whole body. The use of the hot air-bath is to rouse the energies of the system; and in some of these cases the patient is raised, as by the touch of a magic wand, from weakness to strength, by its application."

We have much pleasure in laying before our readers the following notice on the same subject, with which we have been favored by Dr Tweedie: —

"It sometimes happens that the febrile poison is so intense, and the living power so depressed by it, that, the subsequent efforts of the system to bring on re-action being ineffectual, the patient is suddenly placed in great danger, and often dies in a few hours after the first appearance of the symptoms. Under these circumstances the surface feels cold and damp, more especially on those parts which are at a distance from the centre of the circulation; the pulse is feeble and compressible; the functions of the brain are disturbed; the breathing is anxious and hurried, and the lips are livid. All these symptoms depend on the peculiar operation of the febrile poison on the nervous system, and

on the irregular distribution of blood consequent to this. This fluid, probably changed also in its properties, recedes from the surface, and accumulates in the internal organs. In other instances, sudden collapse supervenes in the more advanced stages of fever, and similar symptoms make their appearance. In such embarrassing circumstances, much judgment is requisite to rescue the individual from the danger in which he is plunged. Some writers have recommended blood-letting with the view of relieving the congestion which is supposed to have taken place in the internal organs. This treatment may, in some instances, have been beneficial, though it appears to me that it can only be adopted when the circulation, though oppressed, is still carried on with some degree of vigor; because, should blood be abstracted when the heart's action is weak, fatal syncope may be induced. It should be remembered that, though the heart's action is, in such cases, oppressed by the accumulation of blood which it is unable to propel, this want of power in the heart is primarily induced by the peculiar action of the febrile poison on the whole nervous system. In this debility the heart, of course, participates. In this state of things, more benefit certainly results from the exhibition of diffusible stimulants, while at the same time efforts are made to determine the blood to the surface by the application of the warm air-bath. In cases of collapse coming on in the later stages of fever, bleeding is out of the question: the patient, already exhausted, is thrown into a species of continued syncope; and from this he is to be roused by the cautious administration of stimulants, and the application of the hot air-bath. The exhibition of stimulants is only to be continued while the pulse continues feeble and soft; they are to be immediately withdrawn, or given at more distant intervals, when re-action has taken place."

The pathological state in the early stage of malignant or Indian cholera is very analogous to that in congestive fever; and the indications of treatment seem precisely similar. In such cases the warm air-bath, speedily raised to a high temperature, offers one of the best means of fulfilling these indications; and we are happy to observe that very general preparations are making to give it a trial in the disease that has just (Oct. 1831) broken out at Sunderland.

This would be the proper place to notice the other forms of baths in which the heated air is combined with sulphureous and other dry vapor; but the consideration of these, as also of the medicated humid vapor-baths, particularly the chlorine bath, must be postponed to another occasion. At present we must content ourselves with referring to the works of MM. Gales and Rapou, and to the publications of Mr Wallace of Dublin.

JOHN FORBES.

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I. — ACCOUNT OF A REMARKABLE EPIDEMIC IN WARWICK, MASS.

THERE appeared in Warwick, in July 1831, a strange disease, having some of the characteristic symptoms of dysentery, diarrhœa, and cholera morbus, but bearing strong analogy to the pestilential cholera then prevailing in the North of Europe, and more fatal in its character than that was in many places where it raged.

It began in the centre of Warwick near the end of July. A mother was taken with pains in the abdomen, griping, purging of watery fluid, at first somewhat feculent, afterwards whitish, and vomiting; soon four of her children were seized with the same symptoms; three of the children died, and the mother also. Miss B., who had taken care of these first patients, now returned to her brother's house, about three miles distant, and immediately was taken sick in the same manner and died: her brother and two of his children were then taken, and they all died. Mr W. of Winchester, about two miles distant from Mr B., visited him, being a family connexion, and was attacked after his return home. There occurred two or three other cases in the immediate neighborhood of Mr B. So far the disease might seem to be propagated by contagion, or infection, for every one of these cases could be traced to communication with those already diseased. But this theory was immediately refuted by the sporadic cases, which broke out in various

parts of the town, and which could not be traced either to the original cases or to each other, by the immunity of the numerous attendants and visitors from the disease.

There was nothing in the habits, situations or circumstances, common to the affected, which could act as predisposing or exciting causes of the malady, or, in any way affect its course. It was most fatal in families where the most were attacked, and the convalescent cases were mostly those occurring individually in a house. It was more fatal among a given number of children than adults; and in the two first families the children were much indulged in eating unripe fruit, and particularly pears. Warwick is highly elevated on the mountains, very rough and uneven. — Some of the patients lived on the tops, some on the declivities of the hills, and some in the deep valleys. No difference was observed either in their symptoms or their termination.

There were thirtytwo distinctly marked cases, beside others, which assumed the forms of dysentery and diarrhœa; of these sixteen died, eleven children, and five adults, a greater mortality than the average of the cholera in Europe.

The commencing symptoms were a general uneasiness, a feeling of distress proceeding from the stomach; pain in the pelvic region and rectum, extending thence to the abdomen and the epigastrium, together with great heat, griping, constant desire of stool, and often ineffectual attempts. The diarrhœa was for a short time feculent, but soon the dejections became watery, whitish, very offensive, and attended with a few sybolæ, which were slightly tinged with streaks of blood, discharges of gas at stool, nausea, violent and excruciating pain in the epigastrium and the parietes of the abdomen, spasms in the abdominal muscles, and tenderness on pressure; at the same time were profuse perspirations, over the whole surface, followed by chills and shivering, and these frequently alternated with heat. Irritable stomach; vomiting of a dark greenish fetid fluid; intense thirst, which could be satiated only for a moment with water, which was rejected as soon as it was swallowed; loss of appetite, and food, if taken, caused distress and immediate vomiting. The tongue was red and dry, the skin hot, contracted, dry and pale. The pulse quick, small, weak, and often scarcely perceptible. Head generally painful; mind depressed and stupid.

These symptoms generally continued three or four days, when a change, for better or worse, in their character took place: either the dejections became tinged with bile, and with this

convalescence commenced, or the violence of the disease seemed to exhaust the irritability of the system; coldness and depression of the whole body followed. The dejections became more obstinate and frequent and painful, and could not be checked. Calomel, julap, sulph. magnesia, camphor, opium, neither relieved the bowels of their irritating contents nor diminished the excitability. Indeed, opium was almost the only medicine that could be borne on the stomach, and this so far from checking the diarrhœa, increased it, by acting itself as a cathartic. The sphincter-ani lost its power, and the alvine discharges were involuntary; injections, though prepared with strong doses of tinct. of opii. were not retained a moment, but ran away as from an open vessel. Tenesmus grew more and more urgent; dejections very small, and fetid, with no bile nor fecal matter, but whitish, watery fluid, like rice water; the pain in the rectum and abdomen was burning and distressing; cramps in the abdominal muscles, and slighter passive spasms in adults, but more convulsive spasms in the extremities of children, accompanied the calls to stool. The appetite was entirely gone, the nausea and vomiting grew more violent, stomach threw off a matter like coffee-grounds, and craved cold water, incessantly, which could not be retained. Some took an effervescing draught of soda, which quieted her stomach for a moment, and then was thrown off; and the thirst was as burning and intolerable as before. The mouth, tongue and fauces, and the whole throat suffered a parching dryness, which nothing could alleviate. The tongue was coated with a thick, dark brown fur, and corrugated; sometimes it was red and raw like beef, and always acrid. The pulse became very quick, weak and feeble, scarcely perceptible, and sometimes could not be felt at the wrist: at other times very faint, more like a gentle waving than a beating; this state would be succeeded by an entire loss of pulse, and again the waving returned: this change took place in some cases several times, but in all, there was apparently an entire suspension of the action of the heart for twentyfour hours previous to death. The skin was shrunken, and assumed a pale, leaden, or purplish hue, especially on the extremities. The cutaneous capillaries seemed to be collapsed and paralyzed. The whole surface was covered with a cold clammy sweat: it was flabby and dead, raw to the touch: it chilled the hand of the attendant, while the patient complained of such intolerable internal heat both in the trunk and the extremities, that he could scarcely bear any clothes on the bed.

The nails become of a pale bluish color. It was impossible to restore the vital action of the skin; frictions, stimulant applications, heated flannels, warm baths, &c, answered no purpose, and only warmed the surface, as they would any dead matter, and it immediately became cold again. The patient suffered from a burning pain in the epigastrium, and the anxiety, oppression, and severe distress about the heart, gave him but little rest: he was thrown about in agony and nervous agitation. The respiration was short and with distinct intervals. The breath was inhaled with a laborious effort, speedily checked, and at once expired; then followed a moment of suspension of this function, as if the patient dreaded to make the exertion, necessary for inspiration. The voice was weak and husky; the patient talked mostly in whispers, uttering only one word at a time, for the lungs did not contain air enough, nor had he strength sufficient to articulate more at one expiration. No means used to rally the prostrated powers succeeded: the most active diffusible stimulants, brandy, wine, hot toddy, &c, had all the same effect, rejection from the stomach, and no excitement followed. The muscles of voluntary motion had lost all their susceptibility of action. Occasionally, however, the strength and action returned with violence: the jactitation and spasms were so great that it required the strength of several assistants to prevent the patient throwing himself from the bed. The urine was scanty, high colored, and passed with great difficulty, with pain and a sinking faintness: in many cases this was the most urgent symptom, so that the patient's attention was entirely taken up with it; and he often thought that if he could but be relieved of this, he should be quite well. Sometimes the urine was entirely suppressed, the kidneys as well as the liver having ceased their secretions. The face was pale and cold, features sharpened, the whole expression was ghastly, haggard, and distressingly anxious. The eyes were sunken in their sockets. The sensations were blunted, so that the patient could neither hear nor see with his accustomed readiness, and his mouth had a bad taste in it, and his sense of touch was imperfect. His mind was not disturbed, nor weakened, but he was calm and had no anxiety for himself; was careless of the issue of his own case, but thought much about others: one told me, 'that for himself, he had no desire to live, but for his children, who were sick, he prayed a respite of death." Some watched the progress of their symptoms, and the treatment, and its ill success, with the calmness of an indifferent specta-

tor. Watchfulness, with restless days and sleepless nights added to the general distress. Children were tormented with frequent convulsions, and in these most of them died. Adults were teased with the constant griping, purging and retchings, till exhaustion of the physical strength and the cessation of the motion of the heart left them quiet and easy, while yet the mind was active, and they fully aware of their situation. In this state they expired without pain or struggle, and so calmly that the attendants could hardly determine the time of death. Some emitted a very putrescent effluvia from the skin and lungs before death, and in all putrefaction commenced immediately after this event.

These were the symptoms in the severe cases, variously modified in different patients. In some one, and in others another was the prominent symptom. Some suffered but little from derangement of urinary function; in some the vomiting was very slight: but in all the skin became leaden and cold; the dejections frequent and white, and the pulse lost. Thirteen of the thirtytwo attacks were mild, and in these the disease did not pass to the second or cold stage; these all recovered. Three of the others, whose skins became dead to the touch, and pulse very low, were considered dangerous and yet recovered. The various methods of treatment were equally ineffectual; none answered the indications, and the medicines, which were exhibited, mostly failed of producing their ordinary effects. Whenever the disease was arrested, it seemed to be rather a spontaneous change, than the result of any treatment. Some patients either refused to take, or rejected every medicine and food from their stomachs, and were left entirely to themselves, and yet recovered. The first symptom of convalescence was a tinge of bile in the dejections, and this was in every case except one, a sure prognostic of recovery, and he was better for a few days, and then his stools again became white, and he died. After the appearance of the bile, the stomach was more quiet, could bear medicine, and then large doses of calomel accelerated the cure. At the same time the other symptoms were alleviated. The sphincter, which now performed its office but imperfectly, gradually regained its power: the circulation became free: pulse slow, and full: skin warm and moist; the urine sufficiently copious and limped. After the first change, convalesence was generally rapid.

The attacks were, with one exception, not very sudden, nor were the fatal cases rapid. Generally the first stage continued about three or four days; the latter stage three or four in

children, and five or six in adults. One patient sunk to the cold state in less then twentyfour hours, and died within forty-eight afterward.

This malady raged about five weeks ; the last attacks were near the end of August.

The nature of this disease will be understood from the foregoing description of the symptoms. There can be no doubt that it was the cholera : and that it was not the common bilious cholera is manifest from the want of biliary dejections, which is the peculiar pothognomic of that species. But it exhibited all the prominent symptoms of the spasmodic cholera of Asia, and now of Europe. The description of this disease, by the Medical Board of Bengal, as quoted by Johnson, in his work on "Diseases of Tropical Climates," will almost perfectly answer for the Warwick cholera. Violent and frequent vomitings and dejections of rice-water fluid — absence of bile, cold, pale or leaden skin, extremely feeble, and sometimes suppressed pulse, and spasms characterise the Asiatic cholera, and were the characteristic symptoms here. The spasms in the adult cases were no doubt less violent than those in the Indian cases, but like those of the European cases, they "were generally more or less of a passive kind ;" and when in children, they presented "a tetanic rigidity, particularly in the loins, legs, and arms," as distressing as any cases reported from India. Whether this be the Asiatic cholera, or some new disease, still it was one no less dreadful both in its course and termination. Warwick has about 1000 inhabitants : there were thirtytwo persons attacked, of whom one half died. The cholera in Europe has seldom attacked such a proportion of the people, nor has its mortality been so great asit was here.

If this be the true pestilential cholera of Asia, it proves that whether it be contagious or infectious, it may have another origin, and all quarantine regulations, however rigid, and non-intercourse cannot prevent its appearing among us.

I regret that I had no opportunity of post mortem examination of these cases ; then I could have given a more satisfactory report ; but none were allowed. Indeed, I saw only one case to which I was called in consultation. To Dr Taylor of Warwick, and Dr Arnus of Winchester, who were the attending physicians, am I indebted mostly for my information.

Ed. Jarvis.

Art. II. — Cholera in Boston.

[Continued from page 297.]

Case XIX. — A mason, 28 years old — taken sick in Ann street, on 16th of Sept., and recovered; reported by Dr Thomson — further particulars not known.

Case XX. — A young woman, of good habits, was taken sick in Columbia street, on the 17th Sept., and recovered; reported by Dr Hale.

Case XXI. — Laborer, 42 years old — intemperate — resided on a wharf in Front street. Admitted to Tremont hospital, Sept. 17th, at 7 o'clock, A. M. Had had diarrhœa for a week, more severely for last 24 hours; vomiting came on about two o'clock this morning; pulse 80, small; tongue clean; slight tenderness in epigastrium; great thirst.

Had sinapisms to epigastrium, and following powder, ℞ hyd. submur. gr. x. Pulv. Opii. gr. i. This was thrown up, and then he took same quantity of calomel with $\frac{1}{8}$ grain of sulphate of morphine, and this was repeated at 9 o'clock. 12 M. ℞ magnes. sulph. ʒ i. Aquæ ʒ iv. ol. menth. pip. gtt. XL. The next day he had six natural alvine evacuations, and promised well; but symptoms of delirium tremens supervened, and he died at 12 o'clock on the 19th.

Case XXII. — A pilot aged 60, was admitted to the northern hospital on the 20th Sept. at 5 P. M. with symptoms of cholera — skin, on limbs and body, cold; pulse hardly perceptible; cramps in fingers and toes; passed no urine since 1 o'clock. Has had diarrhœa for 5 or 6 days, and vomiting began last night. Has taken thirty grains of calomel and four of opium since 12 o'clock. Now is ordered to take brandy and laudanum, and to have heat applied to body. At 6 o'clock, saline liquor was thrown into left saphena vein. After 100 ʒ at 112°, had been introduced, pulse became apparent, and in half an hour, was distinctly 90. At 7 o'clock, had brandy, opium and strong coffee. At 8, feels easy, and wishes to sleep; pulse 78, very distinct on wrist; 10 o'clock, falling off; pulse very feeble; difficult respiration. Saline injection repeated; 64 ʒ at 112° to 115°; pulse immediately improved; but other symptoms continued, and got worse, and he died at half past 11. No post mortem spasms.

Autopsy. — 12 hours after death — sinuses and veins of brain contained very little blood; some serous effusion under arachnoid; 3 ʒ serous fluid at base of cranium.

Lungs healthy, and pleura well lubricated; heart contained no blood in either side; fluid blood in aorta and pulmonary artery; in abdomen, peritoneum was well lubricated; intestines contained characteristic secretion; bladder corrugated, and containing creamy fluid, with urinous smell. Muscles generally very pale.

Case XXIII. — A child, 7 years old, pale and delicate, living in Leman's yard — parents noisy, and one at least, intemperate. Was taken sick, Sept. 19. On previous day, no breakfast had been prepared, and green apples were substituted, and more of the same fruit was eaten during the day; had two dejections on 18th. Attacked at 5 A. M. with purging three times profusely, then vomiting came on, and both ceased before 8 o'clock; no cramps were noticed; died at 5 P. M.

Case XXIV. — Laborer, 32 years old, living on wharf, leading from Front street, was seized Oct. 1st, 5 o'clock, P. M. and died between 8 and 9, on following morning. Habits, intemperate.

Case XXV. — Child of the preceding, attended by Dr Jackson, who has furnished the following account.

M. L. aged 2 and a half years, a very robust, healthy child, lived in a ten-foot building on a wharf leading off from Front street, opposite Beech street, where her father died of malignant cholera just before; — cellar of the house very damp, and sometimes, when the tide is high, contains two or three feet of water. For six weeks, the child has had looseness of the bowels; six or eight discharges daily, on an average; mucous, biliary; this, however, was totally neglected, as it did not seem to interfere with her usual good health — could not learn that she had eaten anything out of the common course, previous to attack.

Oct. 3. At $5\frac{1}{4}$ o'clock, P. M. vomiting began; between 8 and 9, her appearance changed for the worse; and at $9\frac{1}{2}$ I saw her — vomiting continued; was supplied liberally with drinks, which were immediately rejected; had had two discharges, altogether ⊙ i, containing a flocculent, nutmeg-colored sediment, which appeared like rice broken down by long boiling, several small lumps of potato perfectly undigested, and a considerable quantity of colorless, starchy looking fluid — no feces — thirst urgent — eyes sunken and encircled by a dark areola — conjunctiva clear — face altogether dark, though flushed — expression anxious — frequently crying out as from some inde-

scribable uneasiness — seems, however, to have no pain in abdomen nor cramps, nor were there any throughout disease — face and extremities cool, trunk warm — pulse distinct. 2 doses of ipecac. of 10 gr. each were given at intervals of 20 minutes, and, at once rejected without bringing away anything remarkable — afterwards 8 grs. of calomel, and from that time small doses of calomel and opium every hour — drinks in small quantities; vomiting recurred but once after the operation of the emetic. I remained with her till past 11, during which time there was no change for the worse.

Oct. 4th, at 2¼, A. M. was called and found her collapsed — countenance more dark, sunken — eyes still clear — areola darker — lips sublivid — face and lower extremities quite cold, trunk warm, as is the breath — upper extremities dark, hands not corrugated — countenance more anxious — dozes for a few minutes, then wakes suddenly — cries out for drink, which she takes greedily — voice not peculiar. 4 or 5 dejections small, "rice-watery" in appearance, with considerable ponaceous sediment; — a teaspoonful of equal parts of brandy and water was now given every 15 minutes — this sensibly diminished the coldness of the face and upper extremities, without increasing the heat of the trunk, but it did not restore the pulse nor otherwise amend her condition. Dr Perry was kind enough to see her with me at this time, considered it a well marked case of malignant cholera, and advised the continuance of the means then in use as affording the best chance of relief; — there were 2 or 3 dejections after this, making altogether 8 or 10 from the time of attack, none of them at all fecal; ¼ before 4 o'clock I left her.

At 4½ she died, the whole duration of disease having been 11¼ hours. Autopsy not allowed.

Case XXVI. — A baker living in Warren street, 42 years of age, and of temperate habits — was first visited at 4 o'clock, P. M., Oct. 8th, and died 6 and a half o'clock the next morning — had diarrhœa for three days previous.

Case XXVII. — An Irish laborer, aged 30, habits unknown, lived at No. 1, Wharf street. On 7th Oct. dined on salt meat and cabbage, his usual diet, — was taken at 10 P. M. with purging and vomiting — was seen in a state of collapse at 2 A. M. and admitted to Fort Hill Hospital at 8 o'clock on 8th of Oct.

At 9 o'clock saline injection used, without much effect, as he died at 12. No previous diarrhœa was known to exist.

He sickened in a small upper chamber of a brick house, having 9 rooms, containing 26 inhabitants — it has a drain and privy, and the cellar was dry and in good condition. The habits and persons of all the inhabitants appeared to be very uncleanly, and the vicinity contains a crowded population.

Case XXVIII. — Irish laborer, aged about 28 — came to the city from Taunton about the 8th, and took lodgings at No. 1, Wharf street. On the 11th dined as usual. In the evening ate oysters and drank cider — was seized at 10 P. M. having had no previous diarrhœa. Was first seen at 8 A. M. of the 12th, in collapse — was taken to Fort Hill Hospital, and had external heat, and internal stimula — died at 1 P. M. — Habits unknown.

Case XXIX. — An Irish laborer of intemperate habits, aged 26 — admitted to Tremont Hospital Oct. 13th. Has lived for some time past in the fourth story of No. 1, Wharf street. Has had diarrhœa for two days — discharges liquid, and white — vomiting commenced yesterday afternoon — had lost a child by cholera at No. 1, Wharf street, and removed to another house in the same street, where he was taken sick. His vomiting gave alarm, and he was obliged to remove again to 118, Ann street, where he was first visited about 1 o'clock this morning. Then he was retching, occasionally throwing up light colored fluid — constantly calling for water — voice characteristic of cholera — no pulse at wrist — extremities cold, hands and feet blue and corrugated — tongue and breath cold — blue circle round eyes.

Taken to Hospital at 2 o'clock, and had dry heat applied to every part of body, and sinapisms to epigastrium. ℞ Hyd. submur. ℈ ii. Pul. opii. gr. ½ and immediately after ℞ Tinct. Camphor ʒ iii.

At 2 o'clock has Hyd. submur. ℈ i. pulv. opii. gr. ½, and the calomel was repeated at 4 and 5 o'clock. He died in early part of day. Galvanism was tried on this patient — slight shocks being passed through spinal column, thorax, and from one hand to the other. The influence was varied by larger shocks, and by a small stream continued for about an hour. Temporary excitement and involuntary muscular contractions were produced, corresponding to the strength of the shocks; but no apparent retardation of the fatal termination.

Case XXX. — Irish laborer, aged 27. Came in from Taunton with case XXVIII, and passed the night of the 11th Sept. with him — was greatly affected by his death. On the evening of the 12th went out to a house on the neck, and was there taken sick, and died.

Case XXXI. — Male, aged 45, living in Codman's buildings, Pleasant street. Fatal Oct. 16th — particulars not known.

Case XXXII. — Male, aged 41 — Fayette street. Fatal Oct. 17th.

Case XXXIII. — Male, aged 50 — Suffolk place. Fatal Oct. 18th.

Case XXXIV. — Male, aged 3 — Suffolk place. Fatal Oct. 18th.

Case XXXV. — Beermaker, aged 24 — good habits — 446, Washington street — Oct. 18th. Had diarrhœa yesterday — today 15 or 16 discharges; admitted to Tremont Hospital, 11½ P. M. Had nausea most of evening, and cramps came on an hour and half before admission — then had slight cramps in extremities, which were warm — uneasy sensation at stomach — pulse 98, small and feeble — eyes somewhat sunken, dark areola round them — skin and fingers slightly corrugated — has passed no urine for 24 hours.

Had dry heat applied to extremities and epigastrium, and scruple of ipecac. Vomited twice, and had a rice water dejection. In 20 minutes got the following: Pulv. Ipecac., Hyd. submur. a a ℈ i. At 1 o'clock had an enema consisting of muriate of soda ʒ i; carbonate of soda ℈ i; and water ☉ ii. At 2 o'clock was ordered the following every half hour till eight were taken. ℞ Hyd. submur. gr. ii; pulv. camphor gr. i. At 5 o'clock had blister to epigastrium, and took three grains of calomel every hour till 8 o'clock, when he died.

Autopsy. Discovered nothing except the common appearances in cholera corpses.

Case XXXVI. — Irish laborer, aged 33, admitted to Tremont Hospital at 11½ o'clock A. M. Oct. 23d. No pulse — skin cold and blue — muscular action in legs and arms very remarkable — has had diarrhœa for several days. Lived at 101, Broad street — yesterday noon seized with vomiting and purging; had medical advice, and was relieved at the time; but became worse in evening.

Had salt and water for an emetic, and vomited white fluid with curdy matter.

℞ ol. Cretoni gr. vi. Vomited after oil, as before, in all about 3 quarts. 12 o'clock, pulse perceptible — skin little warm — constant muscular action. 12½ had following fluid thrown into suphena vein, i. e. supercarbonate of soda ʒ iv, muriate of soda ℈ iv, water ☉ iii, Fahr. 115°. Pulse became full and frequent — warmth restored — blueness of skin less.

P. M. 3 o'clock, patient falling off, and had following injection: sodæ sup. carbon. ℈ iv, sodæ mur. ʒ iv, aquæ ⊙ v. Fahr. 115°. Effects same as before. At ¼ before 6, three pints warm water thrown into a vein, and he took Hyd. submur. gr. x, ol craton. gr. vi. Continued to fail till 8 o'clock, when he died. No *Autopsy*.

Case XXXVII. —Irish laborer, 25 years old. Was found at 7, A, M. Oct. 25, nearly in a state of collapse, at No. 149, Broad street. Had saline injections at 4, and died at 7 P. M.

Case XXXVIII. —Irish laborer, aged 25, at 149 Broad street. Had diarrhœa through night of 21st, and began to vomit early next morning — found in collapse at 10½ A. M. and died at 6 P. M.

XXXIX. —Irish laborer, aged 44, admitted to Tremont Hospital, at 12 o'clock, Oct. 23d, from 147, Broad street. Worked on Deer Island last three months, and came up from there this morning — got very wet coming up, and was taken soon after arrival with vomiting, purging and cramps. When admitted pulse perceptible in one wrist — skin slightly warm — cramps in legs and arms — cutting pains in the stomach, and nausea. ℞ Pulv. ipecac ℈. Vomited a basin full of fluid containing undigested pulp of orange. ¼ before 1, took 30 drops laudanum. At 1, had of calomel ℈ i, and croton oil gtt. iv. Complains of great pain in bowels — apply sinapisms. The pain continuing severe, he had a teaspoonfull of laudanum three times at intervals of half an hour, and at 3 o'clock thirty drops each of laudanum and tincture of cinnamon, and had abdomen rubbed with blistering ointment.

Discharges after he came to Hospital were small, consisting of bloody serum — had an enemi as follows: tinct. opii. cxx. sodæ mur. ʒ i, aquæ ⊙ i. At 3½ o'clock, pulseless, skin cold and blue — died at 5. No *Autopsy*.

Case XL. — Woman, 30 years old, in Milk street, — died Oct. 23d. Particulars unknown.

Case XLI. — Shoemaker, aged 22, of delicate constitution and temperate habits. Was costive on 15th Oct. — seized at 5 A. M. on 16th, collapsed at 1 P. M. Was injected at 6, and again at 11. From this time he seemed to improve till the morning of the 19th. On 18th had 3 bilious discharges; at 9 P. M. urine. 19th bilious purging and vomiting increased in frequency; but ceased at evening — fell off during night, and died at 5 A. M. of 20th. (This case excited a great deal of interest, and indeed, promised, for a time, to become the

'*first fruit*' of the injecting practice among us. It was reported, at length, by Dr Stevenson, in the Boston Journal, and we intend to present it to our readers in a future number.)

Case XLII. Irish laborer, 24 years old, died Oct. 23d, in Gibb's lane — particulars not known.

Case XLIII. — Woman aged 69, died Oct. 23d, in Milk street.

Case XLIV. — Irish laborer, aged 23 — not habitually intemperate. Came up from Deer Island on 22d, when he was much exposed to wet and cold — taken during the night, and found in collapse at 7, A. M. Died the following night.

Case XLV. — Irish laborer, at 96 Broad street. Taken on 25th, at 3 o'clock, P. M. and found dying at 7. Further particulars unknown.

Art. III. — Massachusetts Medical Society.

Sometime before the Cholera appeared on this continent, the Counsellors of the Mass. Medical Society took measures to provide its Fellows, and the public, with an authentic compend of the experience of Indian and European physicians relative to the then expected pestilence; and now that it has been among us, they have entered on the commendable undertaking, of embodying the observations of our own practitioners on the same interesting subject — interesting to us now, not less than before; for it has left us but little more wise respecting its laws and management, than we were when it came, and we cannot divest ourselves of the apprehension that it may return upon us, as it has upon others, and call for all the light and knowledge which we can collect during the interval of its visitations.

The following Circular was sometime since addressed to each Fellow of the Society, and we regret that so few answers have been returned; but trust that the Report and notice which accompanies it, will remind the members of the Society that they owe it to the commendable enterprise of the government, to assist them in this matter, by making prompt and full communications in answer to the questions proposed.

E.

CIRCULAR.

Boston, October 12, 1832.

Sir, — The Counsellors of the Massachusetts Medical Society have directed the adoption of measures to collect information in regard to the epidemic, which has appeared in this country, in the season past. Directed by them, the undersigned Committee have the honor to address you the following questions: —

1. What have been the prevailing diseases in your sphere of practice, since January 1st, 1832?
2. Has there been an unusual tendency to cholera morbus, or to diarrhœa, within your knowledge?
3. Have you seen any cases of malignant cholera, within the period above mentioned? In what circumstances did they occur?
4. Have you seen any cases of disease with symptoms peculiar to malignant cholera in any former period?
5. What treatment have you found most useful in the disorders named above, so far as you have witnessed.

The Committee respectfully solicit you to enter into detail, with a minuteness proportionate to the importance of the disorders you have had opportunity to observe. And you will please direct your answers to George Hayward, M. D., Corresponding Secretary of the Massachusetts Medical Society.

We have the honor to be your very obedient Servants,

(Signed,) John C. Warren,
George Hayward,
E. Hale, Jr.

At a meeting of the Counsellors of the Mass. Med. Society, February 6, 1833, the following Report was presented, read, and accepted; and ordered to be published in the public papers.

"The Committee appointed at the last meeting of the Counsellors, to consider the expediency of taking measures to collect accurate information respecting the late epidemic within this Commonwealth, ask leave to report:

"That immediately after their appointment they issued a Circular letter, directed to every Fellow of the Society, containing five questions, to which they solicited answers; and from these answers they expected to obtain the information which the Counsellors sought by the appointment of the Committee. They have, however, as yet received but twentynine answers,

and though they contain much useful information, the Committee do not feel prepared to make a final Report, until they are put in possession of additional facts. They trust that this will be the case; for a large proportion of the answers which they have received, have come to hand within a short time; and they have reason to hope that the Fellows of the Society are so deeply impressed with the importance of the information which the Counsellors are desirous of obtaining, that they will communicate all the facts in their possession which relate to the subject. The Committee therefore ask a further time to complete the duty assigned them.

"All which is respectfully submitted by the Committee."

Boston, February 6th, 1833.

Editors of newspapers throughout the Commonwealth are respectfully requested to publish the foregoing Report, in order that the members of the medical profession may again be reminded of the earnest wish of the Counsellors of the Massachusetts Medical Society and of the Committee, that every Fellow of the Society should communicate for the public benefit such facts on this important subject, as may have come under his observation.

E. HALE, Jr.,
Record'g Sec. Mass. Med. Soc'y.

Art. IV. — Observations on variola, varioloid, and vaccine disease.

With Cases by Jeremy Stimson *of Dedham, Feb. 10th,* 1833.

In the description of the symptoms and appearances of the following cases of small pox and varioloid, I have been very minute, as there are few physicians in the country under fifty years of age, who have ever seen either; and that number is yearly increasing. There has not been a case of the former in this town during forty years, previously to the one now described; of the latter we have no evidence of its ever having before appeared. I would also add, that I had not seen a case of variola since I was in the hospital forty years since, then a lad of but ten years of age, and never that of varioloid until the appearance of the present case.

Sunday evening, January 6, 1833 — was called to James Cook, a young man of good constitution and habits, in the em-

ploy of Mr Fisher Ames, of this village, of about twentytwo years of age. He informed me that the day previous he had felt weak, languid and depressed; that day he had frequent creeping chills, pains universally, but more particularly in head, back and loins. In the back it was so severe that while bleeding him he could not remain seated, but had to recline on the bed; nausea, skin hot and dry, pulse eighty; had an emetic.

Monday morning, Jan. 7. Symptoms still severe, particularly sickness of stomach, and occasionally retching to vomit; in other respects much as yesterday, had a cath. cal. and jal. which was retained on the stomach and operated thoroughly.

Tuesday morning, Jan. 8. Pains slightly mitigated, skin hot and dry, pulse more frequent, nausea still troublesome, with redness of eyes; had effervescing powders and small doses sub. Mur: Hyd:

Wednesday Morning, Jan. 9. Had a restless and rather sleepless night. At the time of my visit all his painful sensations mitigated, nausea subsiding, redness of eyes increasing, also a general efflorescence resembling rash, or more properly an Crysipelatous blush, was diffused over the entire face and neck. Now for the first time he complained of soreness of throat; examined the throat, it was reddened and somewhat inflamed, but differed from scarlatina anginosa both in the port and efflorescence; it resembled that disease, however, more than any others that I had seen. Breath offensive, tongue thickly coated pulse less frequent; continued the alteratives; in the afternoon had cathartic of senna and sulph. magnesia.

Thursday morning, Jan. 10. Had a more comfortable night, the efflorescence of a deeper and darker hue, extending over the chest, as well as face and neck, resembling in color a boiled lobster, more perfectly than anything else with which I can compare it. On passing my fingers over the efflorescence, it appeared as though the true skin was filled with mustard seeds innumerable. I felt of other parts, where there was no discoloration, and the same sensation of mustard seed or small shot, was presented to the touch. His breath more offensive, and a secretion from the mucus membrane of the mouth resembling ptyalism had taken place; said he was much better, fever abated, asked for something to eat, had a good appetite. It was now evident the disease was not scarlatina anginosa.

Friday morning, Jan. 11. Symptoms much as yesterday; the small shot were however becoming larger. I became anxious as well as my patient to know what the disease was. Could it be miliary fever? This false track I followed through the

day, examining authorities at every leisure moment, and visited my patient again at evening, when I discovered some of the little hard pimples had protruded from the true skin, becoming conical, with a thin fluid at the point. I was now satisfied it was a disease that I had never before seen, and must wait for its further developement before I could give it a name.

Saturday morning, Jan. 12. The appearance of the eruption had changed during the night astonishingly. The pimples had doubled in size, instead of being conical they were broadened and flattened, some even indented; where the efflorescence was, their bases were in juxtaposition, and would soon evidently press on each other. Those on the body and limbs were smaller, coming forth from the true skin conical, hard at the base with a watery point. The small pox, of the confluent kind, now for the first time presented itself to my mind. I went immediately home for Dr Fisher's plates of that disease, and returned with them to the bedside, of my patient, and carefully compared the eruption with the plates, and was fully satisfied I had to contend with variola in its most dreadful form. I immediately announced my opinion to the head of the family, requesting for the present, it might not be made public; that the community must be satisfied as well as ourselves, and the exposed protected if possible, from the contagion. Desired that all ingress and egress might be carefully prevented; that I would proceed immediately to the city, procure kine pock matter, and bring back with me medical gentlemen fully acquainted with the disease. This plan was adopted, and I returned the same evening accompanied by Drs Fisher and Perry, who kindly consented to advise in the case. The disease had advanced rapidly during the day, and they unhesitatingly confirmed my opinion. Notice was now given to the selectmen, who immediately announced it to the public, and adopted every precautionary measure to prevent its spreading. But to return to the case.

Sunday morning, Jan. 13. Restless night, renewed chills, brain oppressed, mind wandering, the secondary fever evidently commenced. Tongue thickly coated, breath very offensive, increased soreness of throat, secretion from mucus membrane increased and more tenacious, mouth and throat filled with pustules, difficulty of utterance, voice hoarse. Pustules on face, neck and chest coalesced in patches, some the size of a cent, some less, and assuming a whitish or silvery color, those on the trunk and extremities enlarging, rounding, and filling with fluid.

Monday morning, Jan. 14. Night sleepless, brain still oppressed, the confluent patches enlarged, tongue swollen, difficulty of utterance increased, fœtor peculiar and intolerable, eyes glued together, general enlargement or swelling of the whole face.

Tuesday, Wednesday, Thursday, Jan. 15, 16, 17. During these three days his mind was clear; fever less, could take liquid nourishment, though at times swallowed with great difficulty; entirely blind. The pock on his face, neck and chest, all united, forming one purulent mass, gradually drying, and on the evening of the 17th his face looked as if covered with a black mask. The pock, on his body, round, full, large, and distinct, thick as they could stand, without running together. Those on his legs and arms, feet and hands, on the last named evening, had become nearly as large, and plump, as those on the trunk, and as near each other as possible, without infringing one upon another, all of a good bright pearly color. His courage good, said he felt strong at the vitals, and we had some expectations he would survive it.

Friday morning, Jan. 18. Spoke with great difficulty, said he felt as well as yesterday, though more debilitated, mind clear. Pulse more feeble, color of the pustules on trunk and limbs greatly changed, they were of a purplish hue, feet and legs disposed to be cold. No medicine had been given for several days past, excepting occasionally a gentle cathartic; now, tinct. cinch. comp. with wine, beef tea, &c, &c, was prescribed. At 11 o'clock, A. M. called suddenly, found him in great distress in the epigastric region, groaned agonizingly, passed his hand over his breast, entreated relief. Had his senses perfectly, knew my voice when I spoke to him. Had taken wine, beef tea, &c, but not the bark; ordered laudanum, to be repeated if necessary; the pock of a very dark purple. Died at half past one, P. M.

The cause of this fatal disease is still a mystery; all the facts we can substantiate, are the following. He has lived in Mr Ames's family upwards of a year. Last September he visited his parents in Vermont, and returned about the middle of October. I questioned him on the subject; he answered me, I have no doubt truly. Said he had never had either small pox or kine pock; during his visit to his friends had not heard the small pox named by any one; brought home no articles of clothing, other than he carried with him, with the exception of a pair or two of stockings and some other small articles his mother made

him. The female domestics aver that all his shirts, stockings, &c, were washed by them, the week of his return. This was nearly three months before the commencement of his sickness. He had been absent from Dedham but once, since his return from Vermont, that was to the city of Boston on the 10th of December, and returned the same day. After his death I learned from the family that he purchased a second hand camlet cloak, at a slop-shop in Boston at this visit, and wore it, they believe, for the first time, the Sunday following. We found a bill of a slop-shop, but not of the cloak, among his papers. I have attempted to trace this fact, by calling at the shop answering to the bill from his pocket book, but the keepers of the shop were in the habit of selling cloaks daily, and could recollect nothing about it. These are all the facts we have, as yet, on the subject. It is possible there was contagion in the cloak, and that he received the disease from that source, but we have no evidence on the subject. If permitted to conjecture, we should think it quite as probable he caught it from some transient person passing through the town with the eruption of varioloid upon him, whom he accidentally met and spoke with, as in any other way.

Case II. Hayden Austin, of good constitution and regular habits, aged about 30, watched with Cook, on Friday night, Jan. 11, in company with his sister Nancy. Left Saturday morning before my arrival. It will be recollected this was the morning I pronounced Cook's disease variola. Austin had the vaccine, about ten years before, but had never been tested by a second inoculation. Wednesday, Jan. 23d, twelve days from the time of exposure, was taken sick. I saw him same day, symptoms creeping chills, slight pain in head, back and limbs, pulse quickened, skin dry, taken together indicating idiopathic fever; had an emetic.

Thursday, Jan. 24. Emetic had operated favorably, symptoms much as yesterday, though slightly mitigated; had a cathartic.

Friday, Jan. 25. Much better, skin moist and soft, said he was well. Directed the family, if any kind of eruption appeared, to notify me; was called the same evening, an eruption had appeared. I examined it critically, there was no efflorescence. On the forehead, neck, and mostly between the shoulders, there were a few red points, about twenty, in all, resembling flea bite, or the true vaccine vesicle, on the third day; not one had a hard base or watery point; those on the forehead I repeatedly rolled under

my finger, and pressed them hard against the bone; the others I took between my thumb and finger, as well as rolled them under the finger, the only sensation was a little fulness or rising of the part.

Saturday, Jan. 26. Quite comfortable, tongue clean, asking food. The eruptions a little more prominent, not increased in number. On examining them in the same manner I had the night before, a few presented a hard base, and two or three a vessicated point; sent him to the hospital.

Sunday, Jan. 27. As comfortable as yesterday. Pustules increased, I should judge, to nearly one hundred, principally on the trunk, a few on the limbs, some in the face, all of which had a hard base, and soon most of them a watery point.

Monday and Tuesday, Jan. 28, 29. A few more pock made their appearance, the older ones increasing in size, conical, never rounding or flattening or having the silvery hue, as in variola.

Wednesday, Jan. 30. Patient dressed and walking about the room as he had done, every day, since he came to the hospital. The older pock had formed the scab, the disease had arrived at its acme, and from this time began to decline. No secondary fever, no offensive breath, sore throat or nauseous fœtor, with the exception of the symptoms of as mild a disease (if this be a fair sample) as that of varioloid.

This disease has been named varioloid, unfortunately as we think, as it leads to error. The word varioloid, from its derivation, means resemblance or likeness to variola, conveying the idea that it is another and different disease. When we are convinced it is one and the same, modified to be sure, yet as far as it proceeds, is variola itself.

We view it as a kind of small pox abortion, evidently of the same species, but checked in its growth and prevented from coming to maturity, from a deficiency of the variola material in the system to nourish and support it. Its early symptoms are the same, only less severe. The pustules come forth about the same time, having the same distinguishing marks, secrete the same virous, and communicate to the unprotected the genuine small pox. Why does it die in this green, unripe state? What could so change and modify this formidable disease? Evidently the system had been previously impregnated by vaccine or variola.

There is plenary testimony, that those who have had small pox the natural way even are liable to, and actually have this disease, as well as those who have had kine pock. The rea-

son is obvious ; some constitutions are so susceptible, that once having either disease does not wholly protect the system from a second attack, and are consequently liable to the same disease in a mild and modified form.

Will not a second inoculation of the kine pock wholly destroy this susceptibility in the system, and protect those who submit to it from varioloid ? We are strongly of opinion that it will have many facts to prove it, which we shall present when treating of the test inoculation.

The perfect protection from variola by proper vaccination, and from varioloid by a second, or what I shall term test inoculation; also the length of time after exposure to small pox, during which the vaccine can strike in, control, overpower and completely vanquish that terrible disease, will be shown by a statement of facts relative to those who were exposed to the contagion in the cases heretofore described.

In the family of Mrs A. (with the exception of herself who had previously had variola, and now removed from her house, resigning it to the sick and exposed) were nine grown persons, eight of whom remained there during Cook's entire sickness, death and burial, all exposed, as much as possible, to the contagion from its commencement. All but two had previously had kine pock and one, of those two supposed she had had it, having been vaccinated twentyfive years before, by a person not a physician, and had a sore arm. I was perfectly satisfied by the appearance of the arm now vaccinated, that the former was other than the true disease, as the latter was as perfect in every stage, as any one I ever witnessed. The other one had a good arm, having as she was certain, never before been inoculated, and had no appearance of a vaccine scar about her. Of these nine persons then, two had, as they informed me, had it twice or been previously tested, five tested now, for the first time, and two as the result proved, never had had it before. These were all vaccinated with the scab on Saturday evening, Jan. 12th, the day Cook's disease was pronounced variola ; and again, all but the two who had been tested, were vaccinated on the Monday evening following with fresh matter ; this being as soon as the fresh could be obtained, and then in so small a quantity, that I could not spare a quill to those who had been tested. The inoculation of Saturday mostly failed entirely in the two who were wholly unprotected, but that of Monday evening took effect in all.

Monday evening, Jan. 14, the time the vaccine took effect,

will, if you compare dates, prove that five and a half days had expired since I discovered the efflorescence, and six full days (if the nurse tells truly, which I have no reason to doubt,) who avers that she perceived it the evening before; (that evening I did not visit the patient). All these persons, notwithstanding the great and constant exposure, came out uninjured, not one exhibiting the slightest symptom even of varioloid.

H. Austin and sister watched with Cook on Friday night, Jan. 11th. He is the person, who had varioloid. His wife spent the same evening in the sick man's room, and then returned to her family of two young children, one a nursling. Austin, wife and sister, were vaccinated with the scab, on the same Saturday night of the others; this inoculation failed in both Austin and wife, but took effect in the sister. On the following Monday evening I re-inoculated the wife, and vaccinated the two children with fresh matter, the father preferring that, although it took every fresh quill I had, leaving none for him. The test inoculation of the sister, the perfect arms of the wife and children protected them, and Austin himself was the only one, of all who had been exposed, that had not been tested; and he alone had varioloid.

To prevent the spread of small pox, the superintendents of vaccination, for the town of Dedham, recommended a general vaccination, throughout the town, in districts, at their several school houses, as soon as a sufficiency of fresh vaccine matter could be procured. I vaccinated, in what is termed the old parish, the one in which the small pox existed; and advised those who had been vaccinated, and their arms pronounced perfect by the physician who had inoculated them, to be tested by another vaccination. In consequence of this recommendation, and the great alarm, I vaccinated, in the course of a week, upwards of a hundred, and carefully inspected their arms; the following is the result of my observations. Their arms presented four different and distinct appearances, which, to make myself more clearly understood, I shall divide into four classes, and describe each separately. There were the greatest number in what I term the first class; the puncture, where the matter was inserted, presented on the third or fourth day a little pale red conical tumor, somewhat resembling the true arm, on the fourth day, but more conical, and not so lively a red, and then gradually faded away, and in a few days, wholly gone; some of this class merely showed the arm had taken, itched a little, and was gone.

The second class, somewhat resembled a pus boil, reddening immediately, that is, the same day of the introduction of the matter; the vesicle having a conical, and in some cases, almost a sharp point, with a very irregular areola, looking very irritable and angry, and passing away, the seventh or eighth day; some of this class, however, were not so pointed, having the vesicle larger but very irregular, its areola continuing a little longer, and as it faded away itching intolerably.

The third class somewhat resembled a carbuncle; it came forth not so rapidly as the last described but much quicker than the true disease, and had little resemblance to it. The vesicle large, oval rather than pointed, its areola irregular, of a dark red chilblain appearance, continuing longer than those of the second class, passing away about the ninth or tenth day, having a large thick semicircular scab.

The fourth class resembled very nearly the true vaccine vesicle. It came forward in the same slow, gradual manner. On the completion of the seventh day, it required an experienced and practiced eye to distinguish the false from the true. At this age, the vesicle was well formed, and perfectly regular, not quite so large and more abrupt at its edges, having a stiff appearance as if cast in a mould. Its surface was nearly flat, never conical, sometimes slightly concave. It wanted that soft, distended, rounded margin, with the divided concave, cup-like depression of the true vesicle. Its areola appeared a little earlier, commencing on one side, and not regularly all around the vesicle, of rather darker hue; and never so perfectly and beautifully irradiated, or having its brightness so gradually diminished as the true ariola has.

It advanced now more rapidly, the arm was sorer and more painful, the constitutional symptoms quite as strong, and in some instances I thought more severe. It formed its scab on the twelfth or thirteenth day, which was less transparent, and turtle shell like, than the genuine. Of this class, there were about twenty in the number I tested which was a little over a hundred, making a proportion of nearly one fifth.

We carried the experiment still further, inoculating most of this fourth class again, and invariably producing an arm in every respect similar to those of the first class.

Among those who were tested, some had the kine pock thirty years ago, others I had vaccinated twenty five years before, and from that time to the year last past. We found but one case of the fourth class among those who had been vaccinated

twentyfive years and over; the other nineteen were scattered along, without having any regard to the time when the first inoculation had taken place.

Some physicians have supposed, they could determine the validity of the first inoculation, by the examination of the scar; where that appeared distinct, in form oval, with little star-like indentations, they were confident the system was fully protected and another vaccination unnecessary. They are mistaken, we think, and the scar wholly deceptive, for in every case where we found an arm of the fourth class, we examined the scar, and found it in almost every case, with the appearance above described, as indicating security.

From the foregoing statement of facts, we think we may fairly draw the following conclusions.

1st. That kine pock will take precedence, and protect from small pox all who have been exposed to it, six full days from the time of efflorescence, and five of the eruption.

2d. That the test inoculation is all important, and will wholly destroy the variolous susceptibility in the system, in all constitutions.

3d. That those, in the test inoculation, described in the fourth class, would have had varioloid, had the person been exposed to the small pox, previously to this vaccination.

4th. That length of time has no tendency, to diminish the effect of kine pock in the prevention of Small Pox.

5th. That the appearance of the scar is deceptive, and not in the least degree to be relied on.

We would also add, that our confidence in vaccination is perfect, when it is repeated until the variolous susceptibility of the system is destroyed. As far as our experiments go, a second inoculation has proved sufficient, but it is possible that some constitutions may require more, therefore think it advisable to repeat the inoculation, until the arm shows the system fully saturated.

We think the kine pock a better protection against varioloid, than the small pox the natural way, or by inoculation. Our experiments as far as the small number of eight prove it, are conclusive, that the test inoculation completely protects the system from that disease; and we know of no remedy against it where persons have had variola.

Of all causes the varioloid is one most likely to spread the small pox throughout the land. A disease so mild, that after the symptoms have disappeared, the persons having it are able, in most cases, to be about their business, and at a

time, when they have unconsciously a contagion about them which would communicate this loathsome and fatal disease to the unprotected, should they come in contact; and the one receiving it, be as unconscious of the source whence it came, as though it had been borne to him, on the wings of the wind.

It behoves physicians then to be wary; repeat and extend as far as necessary the test inoculation and all other experiments pertaining to this subject as opportunity offers, for it is demonstrably true, that to prevent small pox we must prevent varioloid.

Art. V. Library of Practical Medicine, vol. iii.

The Committee of publications of the Massachusetts Medical Society have made arrangements with Messrs. Carter & Hendee to republish in the third volume of the Library of Practical Medicine, the "Practical Treatise on Diseases of the Eye," by Wm. McKenzie, Lecturer on the Eye in the University of Glasgow, and one of the surgeons in the Glasgow Eye Infirmary. By this arrangement this extensive and very valuable work will not only be distributed to the physicians of Massachusetts, through the agency of the Medical Society, but will also by the publishers be made accessible to the rest of the profession throughout the country, at a moderate cost, *and in a handsome form.* The profession have great reason to complain of the style in which many European works have been republished in this country, especially in some of our southern cities. The meanness of the paper and execution have often been such as ought to have deprived the work of patronage; although it has not in fact had the effect to reduce the price, at all below what would have been a fair compensation for a well-executed work. It is one of the collateral benefits, conferred upon the profession by the series of the Library of Practical Medicine, and one of no small utility, that it sets the example of the republication of European Medical works, in a style of respectability and convenience; without any increase of price, as compared with meaner publications, in consequence of the improvement.

Art. VI. — Climate.

The following excellent summary on the subject of climate — a most important element in the healing art — is from the pen of Dr James Clarke, an English physician too well known to medical readers to require any explanation or apology for availing ourselves of his valuable labors as extensively as we have in reprinting this paper.

We give it now, however, as introductory to some remarks of our own, in a future number, on the value of the W. I. Islands as a retreat for the invalids of nothern climes, in which particular we do not entirely agree with the author of the present article. — E.

The general import of the word climate (from κλιμα, regio,) is sufficiently understood, although it is not easy to give an accurate definition of it. In medicine the term is used to designate those habitual conditions of the atmosphere, in connexion with the state of the surface, soil, exposure, &c, of particular countries, or districts, which are capable of influencing the health of persons inhabiting them.

The subject of climate may be treated under two distinct divisions, physical and medical. The consideration of the former, or physical climate, we must leave to the natural historian, as not coming properly within the scope of this work, although affording matter of the greatest interest to the medical philosopher. The latter, or medical climate, may also be considered under two separate heads, — as it affects the body either in causing or curing disease. The latter part of the subject, or the consideration of climate as an agent in the prevention and cure of disease, is that which we propose to treat in the present article; availing ourselves, however, of the physical characters of climate and the geography of disease, as far as a knowlege of these departments of the subject tends to illustrate the medical application of climate.

We shall first give a brief account of the climate of the principal places in our own Island, in the South of Europe, and in the Northern Atlantic, which have been most frequented by invalids; and endeavor, at the same time, to determine their respective characters and their relative merits. We shall then point out the diseases which are most decidedly benefited by change of climate, and the particular situations most suitable to each.

The influence of climate on the animal economy is now so well known and appreciated by the more observant part of the profession, that it would be waste of time, in a work of this nature, to enlarge upon the advantages which may be derived

from a well-timed and judicious change of it in the treatment of disease. The removal, for example, from a cold, humid, and variable climate, to one which is warm, dry, and more equable, is well known to be productive of the most beneficial effects on a large class of invalids, when other therapeutical agents are of little avail; while, on the other hand, a contrary change is as certainly attended by a deterioration of the health, and often by the supervention of fatal diseases, even in persons previously in the enjoyment of good health.

If our limits permitted, it would not be difficult to account for many of the effects of climate, whether favorable to health, or the reverse. For instance, when we reflect on the powerful influence of a warm dry air on almost all the functions of the animal economy, but more especially its obvious agency in promoting an equable distribution of the circulating fluids over the whole system, and particularly its effect in augmenting the activity of the circulation in the capillaries of the surface, and in diminishing in the same proportion the congestion of the internal vessels, (a state which very generally obtains in chronic aliments,) — we have a satisfactory explanation of much of the benefit which invalids experience by a removal from a cold to a warm climate. If we take into account also the effect of the continual action of a bland atmosphere on the extensive surface of the respiratory organs, both as abating irritation of the lungs, and enabling them more effectually to produce those changes in the blood that are essential to health, we have another very obvious explanation of the results observed. And if to these we add the influence produced on the nervous system generally, on the external senses, and through them on the mind, and, reversely, the reaction of the mind on the bodily functions, — we need have little difficulty in accounting for the beneficial influence of the change of climate which we are now considering.

The contrary state of the functions and of the circulation, and the diminished energy of the nervous system induced by a change from a genial to a cold and humid climate, will with equal readiness account for most of the evil consequences so frequently observed under such circumstances.

Independently, however, of these effects, more directly attributable to climate, properly so called, there are many incidental circumstances attending a change of this kind, which have often no small share in improving the condition of the invalid. The hopes inspired by the measure itself, the influence of the

journey or voyage, the change of scene, of occupation, and often also the escape from business and other sources of discomfort and care, — all claim a part in the benefit produced.

While all these circumstances will, therefore, have their due weight with the physician, when deciding upon such a change of climate as we are now contemplating, he must not omit, at the same time, to take into account the inconveniences, and even disadvantages, which in many cases are inseparable from the removal of the delicate invalid from his own home and country. These latter considerations will rise in importance in his mind according to the advanced state of his patient's disease, and consequently the diminished prospect of permanent advantage from the measure. So many circumstances of a conflicting nature often present themselves for our consideration in such cases, that it is only by a comprehensive and dispassionate view of all the bearings of the case, that we can come to a right decision, and then often not without difficulty. It is perhaps the rarer case, that we have merely to consider the nature of the patient's disease, and the probability of its being benefited or cured by any particular climate.

Among the numerous circumstances which require attention in recommending a change of climate, one of much importance is often entirely lost sight of, both by the physician and his patient: — we mean the necessity of perseverance in the regimen and mode of life which the peculiar nature of the disease demands. This must be urged upon the invalid as the condition on which alone he can expect to derive benefit from the prescribed measure.

We would press upon the minds of our professional brethren the importance of giving a full consideration to all the circumstances which have been just noticed; as we are satisfied, from ample observation, that change of climate has not hitherto been productive of all the benefit which it is calculated to effect, — nay, that it has often done positive mischief, chiefly on account of the inconsiderate and injudicious manner in which it has too generally been prescribed and carried into effect.

We shall now proceed to give some account of the individual places in this and other countries which have been chiefly resorted to by invalids, on account of the mildness or other peculiarities of their climates.

English climates. — The great desideratum in this country is to find a mild climate and sheltered residence for our pulmonary and other delicate invalids during the winter

and spring: we shall therefore direct our attention principally to this point.

Our warmest winter residences in England are mostly found on the southern and south-western shores; indeed it is their vicinity to the sea which in a great degree renders them warmer than the inland parts in their respective vicinities.

The winter climate of the south coast of Devon has long been noted for its mildness. The temperature of its more sheltered spots during the months of November, December, and January, (when the difference is greatest,) is, in the average, about five degrees higher than that of London during the same period; whereas, on the south coast, the difference scarcely exceeds two degrees. This superiority of temperature over London at both places, occurs chiefly during the night; though the days are proportionally warmer, and the temperature more steady on the south-west than on the south coast. In making this comparison, however, between these two districts, it is right to observe that Undercliff is not taken into the account, for want of sufficient data.

Various places on the coast of Devonshire are held in repute on account of the beneficial effects of their climate, more especially in pulmonary diseases. The principal of these are *Torquay*, *Dawlish*, *Sidmouth*, and *Exmouth*. Salcombe, the Montpellier of Huxham, is unquestionably one of the warmest spots on our island during the winter; but it possesses few accommodations, and its sheltered climate is confined to too small a space to admit of its ever acquiring importance as a residence for invalids. Indeed, this limited character of the climate is the great defect of all the places on this coast, with the exception of Torquay. Here the invalid has the advantage of a considerable tract of sheltered country, some part or other of which will afford a protected ride or walk, in whatever direction the wind blows. Torquay is superior in this respect to every place in our island. Its position also on the southern declivity of a range of pretty steep hills, composed chiefly of calcareous rocks, renders it comparatively dry. Hence, while Torquay possesses all the advantages of the climate of this coast, its chief disadvantage (humidity) is felt in a less degree than elsewhere.

Land's-End. — The only place in this district deserving particular notice is *Penzance*, which has long been frequented by invalids on account of the mildness of its winters. Penzance has a very peculiar climate, which depends on its almost

peninsular situation at the south-western extremity of the island. A remarkable equality in the distribution of the temperature throughout the year, and throughout the day and night, is a striking character of this place. In this respect, indeed, the climate of Penzance is superior to that of the south of Europe, and the only climate which we have examined that excels it is that of Madeira. This peculiarity of the climate of Penzance will be shown at once by comparing it with that of London, where the difference between the warmest and coldest months is 26°, while at Penzance it is only, 18°. In winter, Penzance is, on an average, nearly six degrees and a half warmer than London during the night, and but little more than three degrees during the day.

In other respects the climate of the Land's-End does not stand so high in a medical point of view. It is very humid; the quantity of rain which falls annually at Penzance being nearly double that which falls in London, and the number of rainy days much greater. This district is also proverbial for the frequency and violence of its gales; and Penzance, owing to its total want of shelter from the northerly and easterly winds, is colder during the spring than either Torquay or Undercliff. Hence it is, that although Penzance possesses a decided superiority over all the other situations in our island in the mildness and equability of its winter climate, its humidity, exposed situation, and liability to winds, render it inferior to several other places as a residence for invalids.

Clifton, the only place in the western district which we deem it necessary to notice, has several local advantages, and possesses the best climate in the part of the country where it is situated. Compared with that of the south-west coast, it is more exciting, more bracing, and drier, but not so mild. It is therefore less suited for pulmonary and other diseases, accompanied with much irritation, and with a tendency to inflammation. On the other hand, it is better adapted to invalids of a relaxed, languid habit; and is also very beneficial in many cases of dyspepsia, in affections of the mucous membranes with much secretion, and in the scrofulous affections of young persons.

In making a selection among these, which we consider the best winter climates in our island, in any particular case, we must consider well the character of the patient's disease and the nature of his constitution, before we venture to decide upon the situation best suited to him. But by attention to these points

and to the qualities of the different climates, which we have endeavored to state as clearly as the nature of the subject and the extent of our knowledge would admit, the medical practitioner will not err greatly. In order, however, to illustrate the subject further, we shall add a few more particular observations on the practical application of English climates to the disease.

The climate of the south coasts of Devon and Cornwall will be found very efficacious in soothing an irritated and irritable state of the respiratory organs, and of the mucous surfaces generally; as in chronic inflammation of the fauces, and of the laryngeal, tracheal, and bronchial membrane, of a dry irritable character, or at least accompanied with little secretion, and highly susceptible of increased irritation from sharp, dry winds. In dyspepsia depending chiefly on an inflammatory condition of the mucous membrane of the digestive organs; in disorders of the uterine system, arising from a similar condition of the parts, giving rise to dysmenorrhœa; also in the numerous nervous affections originating in the disorders of these two influential classes of organs, this climate may be confidently recommended, and will generally be found beneficial. To these may be added cutaneous diseases of a dry irritable character. On the other hand, in disorders of the same organs and parts attended with passive congestion, or very copious secretion; in dyspepsia from an atonic state of the stomach, and in disorder of the uterine system, accompanied with an excessive flow of the catamenia, or leucorrhæa; and, in short, in all diseases attended with a relaxed state of the system generally, benefit is not to be expected from the climate of the south-west coast; more especially if the invalid prolongs his residence beyond a few months. The climate of Clifton, as has been already remarked, will prove more favorable in the cases last referred to. Brighton also presents an excellent autumnal climate for such invalids, and to persons of little constitutional sensibility offers a good residence throughout the winter, provided the more sheltered situations be selected. Hastings is a residence better adapted to invalids suffering from pulmonary irritation. During the spring months, that is, after March, any dry sheltered situation in the milder districts of the interior we believe to be superior to the south-coast, with the exception of Undercliff.

After this survey of the best winter climates in England, it may be expected that we should take some notice of our more salubrious summer residences. On this subject, however, it is not necessary to go into detail as there is no lack of healthy

situations to which our invalids may repair with advantage during this season. In the selection of a summer, as of a winter residence, the same circumstances require attention, both as regards the character of the climate and the nature of the invalid's disease. The milder and more sheltered situations must be chosen, even during this season, for delicate and very sensitive invalids; while for the relaxed and enervated, and those possessing less sensibility, the bracing air of the higher and drier localities will prove more suitable. To a large class of invalids our sea-side watering places offer a variety of excellent situations; and for those cases in which sea-bathing promises benefit, they deserve a preference over the interior, especially during the latter part of the summer and autumn. Several of our inland watering places, independently of the advantages to be obtained in many cases from the use of their mineral waters, afford good summer climates; and, indeed, some of them, more on this account than any other, have become places of fashionable resort. Among these we may mention Malvern, Cheltenham, Leamington, Tunbridge Wells, Matlock, Buxton, &c. When the intention is to use the mineral water, the climate must of course be made subservient to this object; but when a choice of waters is admissible, it is of importance to many invalids that the climate selected also be suitable to them. In general it will be advantageous to invalids who have taken a course of mineral waters at any of those places, to pass the autumn by the sea side, as at some of the driest places on the south, or south-east coast. In the greater number of cases in which travelling is borne without inconvenience, several changes, or a succession of short journeys, will be more beneficial than a residence at any one place during the whole season. It is remarkable how such repeated changes, with frequent gentle exercise, especially on horseback, renovate the constitution enfeebled by disease, enable it to overcome many chronic affections, and contribute to the restoration of permanent health. But we shall have occasion to recur to this subject.

Before commencing our review of foreign climates, the islands of *Guernsey* and *Jersey* require some notice, as they are occasionally resorted to by invalids from this country. The climate of these islands resembles in its general characters that of the coast of Devonshire; it is somewhat warmer but not more steady, and is more exposed to high winds. Those from the south-west prevail during the autumn and winter, while

those from the north-east often continue for weeks together during the spring, producing the same unpleasant effects on invalids which arise from them in this country. The climate is found by experience to be beneficial in the same diseases and in constitutions of a similar character, as that of our south-west coast; the observations therefore formerly made relative to the class of invalids that may expect to derive advantage from the latter, apply equally to persons who may be sent to Jersey, which, of the two islands, is in all respects the best suited for invalids. The summer climate of these islands is delightful.

Foreign Climates. — The climate of the *South of France* has long been held in repute, but all the southern provinces of that country are far from possessing the same climate; those situated on the eastern frontier being very different in this respect from those on the western. It is highly important, as we shall presently show, to attend to this distinction in recommending the south of France as a place of residence for invalids.

South-west of France. — We comprehend under this division the tract of country which extends from Bordeaux and Bayonne to Toulouse.

The transition from the climate of the south-western shores of our own island to that of the south-west of France is easy and natural, inasmuch as they exhibit a striking similarity in their general characters. Taking the southwest of France generally, the mean annual temperature is only about 4° higher than that of the southwest of England. Both climates are soft and rather humid, and agree and disagree, generally speaking, with diseases of the same character.

Pau is the only place in this district of France which we deem it necessary to notice particularly. This little town, which has been a good deal frequented of late years by invalids from this country, is pleasantly situated at the base of the Pyrenees; and when its close vicinity to that range of lofty mountains is considered, it certainly possesses a far milder winter and spring climate, and is much less subject to high winds and extensive transitions of temperature, than might be expected. One remarkable circumstance in the character of its climate is the mildness of the spring, and its comparative exemption from sharp cold winds during that season. In this respect it bears a very favorable comparison with the climates of the south of Italy. While Pau is 6° colder than Rome during the winter, it is only $2\frac{1}{2}$° colder in the spring. Compared with the warm-

est parts of England, the same superiority of its spring climate holds good. Penzance during the winter months is 3° *higher* than Pau, but 5° *lower* in the spring. This mild character of the spring constitutes the great advantage of the climate. Pau is also very free from fogs, and possesses a dry soil. Its chief fault is the unsteadiness of its temperature. It may however be considered, upon the whole, the most favorable residence for invalids in the south-west of France, as far as we have had the means of judging. The difference between the climate of Pau and that of the best situations in England is not great. It is drier and warmer in the spring, and the northerly winds are much less trying to invalids than in this country. One advantage possessed by it is its vicinity to the delightful watering places among the higher Pyrenees, which offer to the invalid who has passed the winter at Pau a healthy summer climate without the inconvenience of a long journey.

South-east of France. — Under this division we include that extensive tract of country which stretches along the shores of the Mediterranean, from Montpellier to the banks of the Var, the boundary stream between France and Piedmont. The climate of this district is warmer and drier, but more irritating and exciting than that of the south-west. It is also subject to sudden vicissitudes of temperature, and to frequent harsh, cold winds. This great liability to cold piercing winds, more especially the north-west, *(mistral,)* which often continues to blow with considerable force for many days together, renders the whole of this country an improper residence for patients suffering under, or peculiarly disposed to inflammation or irritation of the respiratory organs. We consider the custom, therefore, which has long prevailed, of sending consumptive patients to the south of France, a grievous error; an error which the obvious character of the climate, and the result of ample experience of its effects, should have long since corrected. There may be constitutions having a tendency to tuberculous disease, which might even derive some benefit from a temporary residence in this climate; but when tubercles already exist in the lungs, it will certainly prove injurious.

After this account of the climate and its effects on phthisical patients, (the cases which have been chiefly sent thither,) it will be unnecessary to say much of the different places in this district which have been most frequented by invalids. We shall, however, notice the principal of these briefly.

Montpellier. — This place has now so completely lost the

character which it once possessed as a mild climate, that it may suffice to remark here, that a more improper residence could scarcely be selected for a person disposed to pulmonary disease. Its high, exposed situation renders it liable to all the evils of this climate in a remarkable degree; and it is, moreover, well ascertained that pulmonary inflammation, and phthisis are among the most prevailing diseases of the place.

Marseilles. — Although less exposed than Montpellier, this is an equally improper residence for consumptive invalids. From the manner in which the environs of Marseilles are divided into small properties, surrounded by high walls, the invalid has no means of taking proper exercise, or of breathing country air; and without these, consumptive invalids can derive little advantage from any climate. For cases likely to benefit by a dry sharp air, Marseilles forms a good winter residence. It is said to prove particularly favorable to persons who have suffered from intermittent fever.

Hyères possesses the mildest climate in the whole of this district, and this advantage it owes chiefly to its sheltered situation at the base of a range of hills which protect it, in a considerable degree, from northerly winds. The country also around this little town differs in its character from that of Provence generally, (which comprehends the larger portion of the district now under consideration.) The hills here present the appearance of verdure, being covered with shrubs, many of them evergreens, affording a pleasing contrast to the bare and rugged mountain masses which form so striking a feature, and compose so large a portion of Provence; a country which very generally disappoints the expectations of the traveller, and especially of the invalid, whose hopes have been raised high respecting the beauty of the South of France. The extensive orange gardens which flourish under the immediate shelter of Hyères, and the verdure of its hills, afford evident proofs of the amenity of its climate, while by experience it is known to be one of the most favorable residences for invalids in this part of France, — certainly the best with which we are acquainted.

Nice. — This place has long been celebrated for the mildness of its climate, and continues to form the favorite resort of a numerous class of invalids, both from this and other northern countries. Although situated in the same line of coast as Provence, Nice is superior to it in several respects. In the general qualities of its climate it certainly resembles that of the south-east of France; but it has some important local advan-

tages over the best parts of that country. By its steep and lofty range of mountains it is protected from the northerly winds, and especially from the mistral, which we have stated to be so prevalent, and which experience proves to be so injurious to delicate invalids, in Provence. This circumstance gives a comparative degree of softness to the climate ; but it is still rather exciting. Nice is not exempt from cold winds, especially during the spring; indeed, the prevalence of these constitues one of the principal objections to the climate of this place in pulmonary diseases generally. For consumption, even in its earlier stages, we consider Nice an unfavorable situation, in a very large proportion of cases. In bronchial diseases of the dry irritable character, it is also prejudicial ; and in dyspepsia, depending on an irritated or inflammatory condition of the mucous membrane of the stomach, it is equally so. So decidedly, indeed, is this the case, that when such a state of the digestive organs exists, the invalid will derive little benefit from a residence at Nice, whatever may be his disease. Though warm and dry, the climate is ill suited to irritable habits. With languid, torpid constitutions, on the other hand, it agrees well. In the scrofulous affections of young persons possessing this character of constitution, it produces the best effects; as it does in chronic bronchial disease accompanied with copious expectoration, and in what has been termed humoral asthma. In chronic rheumatism it is found very beneficial ; and in deranged health from various causes, in which a dry, warm, and rather exciting climate is indicated, advantage will be derived from a winter spent at Nice ; provided always that the state of the digestive organs which we have adverted to does not exist. In consequence of the tendency of the climate to aggravate and even excite gastric irritation, a more abstemious diet is requisite for invalids than in England. The summer at Nice is too hot for any class of invalids.

To be continued.

We have a notice of the first American edition of Spurzheim's Phrenology, lately published by *Marsh, Capen & Lyon*, which must be deferred till the next number.

" Flint's Lectures on Natural History," which contain much useful science in a popular form, have some physiological matter, which we shall examine at a future time. The volume is handsomely executed, and published by *Lilly, Waitt, Coleman & Co.*

COLLECTANEA.

Etiolation, or Blanching.

"The inhabitants of a city may easily be distinguished from those of the country, by the pallor of their complexions. The care-worn countenance, is generally 'sicklied o'er with the pale cast of thought,' but the etiolation or blanching which I am now to notice, takes place independently of much thinking or mental anxiety. It is the result of physical, rather than of moral causes — more especially of bad air, inexposure to the light of heaven, sedentary avocations, inactivity, late hours, &c. I have used the word etiolation, because I think it perfectly appropriate. When a gardener wishes to etiolate, that is, to blanch, soften, and render juicy a vegetable, as lettuce, celery, &c, he binds the leaves together, so that light may have as little access as possible to their surfaces. In like manner, if we wish to etiolate men and women, we have only to congregate them in cities, where they are pretty securely kept out of the sun, and where they become as white, tender, and watery as the finest celery. For the more exquisite specimens of this human etiolation, we must survey the inhabitants of mines, dungeons, and other subterranean abodes — and for complete contrasts to these we have only to examine the complexions of stage-coachmen, shepherds, and the sailor 'on the high and giddy mast.' Modern Babylon furnishes us with all the intermediate shades of etiolation, from the 'green and yellow melancholy' of the Bazaar maiden, who occupies somewhat less space in her daily avocations and exercise, than she will ultimately do in her quiet and everlasting abode, to the languishing listless, lifeless Albinos of the boudoir, etiolated in hothouses, by the aid of 'motley-routs and midnight madrigals,' from which the light as well as the air of heaven is carefully excluded! Thus penury and wealth, obscurity and splendor, industry and idleness, the indulgence of pleasure and the endurance of pain, all meet at the same point, and, by the mysterious workings of an over-ruling Providence, come to the same level, in this respect, at last! That voluntary dissipation should suffer all the evils attendant on necessary and unavoidable avocation, no one can regret: — but that useful toil and meritorious exertion should participate, and more than participate in the miseries which fol-

low in the train of the 'gay licentious proud,' is a melancholy reflection. The longer we live in this world, however, and the more narrowly we watch the ways and the fate of man, the more we shall be convinced that vice does *not* triumph here below — pleasure is invariably pursued by pain — that riches and penury incur nearly the same degree and kind of taxation — and that the human frame is as much enfeebled by idleness as it is exhausted by labor." — *Johnson's "Change of Air."*

Sion. Cretinism.

"We are now in the centre of the Vallais — the head-quarters of goitre and cretinism. There are few portions of the earth's surface, in these temperate climes, better calculated for the deterioration, if not the destruction of life, than the Valley of the Rhone. It is bounded on each side by steep mountains, four or five thousand feet in height — and the intermediate ground contains all the elements that are found to operate against human health. The valley consists, in some places, of a rich, flat, alluvial earth, covered with corn, fruit trees, and gardens — in others, it presents swamps and meadows — then, again, jungle and woods — vineyards, pine forests, &c, while brawling brooks intersect it in all directions, and often inundate it, in their precipitous course from the mountains to the Rhone, which runs through its centre. Were this valley beneath a tropical sun, it would be the seat of pestilence and death. As it is, the air must necessarily be bad; for the high ridges of mountains, which rise like walls on the north and south sides, prevent a free ventilation, while, in Summer, a powerful sun beats down into the valley, rendering it a complete focus of heat, and extricating from vegetation and humidity a prodigious quantity of malaria. In Winter, the high southern ridge shuts out the rays of a feeble sun, except for a few hours in the middle of the day — so that the atmosphere is not sufficiently agitated at any season of the year. To this must be added, the badness of the waters which, along the banks of the upper Rhone, are superlatively disgusting.

As the Vallais is the land of cretinism, so is Sion the capital of that humiliating picture of humanity! There are but few travellers who take the trouble to examine Sion philosophically, and make themselves acquainted with the state of its wretched inhabitants. I explored this town with great attention, traversing its streets in every direction; and I can safely aver that, in no part of the world, not even excepting the Jews' quarter in Rome, or the polluted back lanes of Itri and Fondi, in the kingdom of Naples, have I seen such intense filth! With the exception of two or three streets, the others present nothing on their

surface but a nameless mass of vegeto-animal corruption, which, in all well-regulated towns, is consigned to pits, or carried away by scavengers. The alleys are narrow; and the houses are constructed as if they were designed for the dungeons of malefactors, rather than the abodes of men at liberty.

Goitre, on such a scale as we see it in the Vallais, is bad enough; but CRETINISM is a cure for the pride of man, and may here be studied by the philosopher and physician on a large scale, and in its most frightful colors. This dreadful deformity of body and mind is not confined to the Alps. It is seen among the Pyrenees — the valleys of the Tyrol — and the mountains of China and Tartary. Nearly 200 years have elapsed since it was noticed by Plater, in the spot where I am now viewing it; but Saussure was the first who accurately described this terrible degeneracy of the human species. From common bronchocele, and a state of body and mind bordering on health, down to a complete destitution of intelligence and sensibility — in short, to an existence purely vegetative, Cretins present an infinite variety of intermediate grades, filling up these wide extremes. In general, but not invariably, goitre is an attendant on cretinism. The stature is seldom more than from four to five feet, often much less — the head is deformed in shape, and too large in proportion to the body — the skin is yellow, cadaverous, or of a mahogany color, wrinkled, sometimes of an unearthly pallor, with unsightly eruptions — the flesh is soft and flabby — the tongue is large, and often hanging out of the mouth — the eyelids thick — the eyes red, prominent, watery, and frequently squinting — the countenance void of all expression, except that of idiotism or lasciviousness — the nose flat — the mouth large, gaping, slavering — the lower jaw elongated — the belly pendulous — the limbs crooked, short, and so distorted as to prevent anything but a waddling progression — the external senses often imperfect, and the Cretin deaf and dumb — the *tout ensemble* of this hideous abortion of Nature presenting the traits of premature old age! Such is the disgusting physical exterior of the apparently wretched, but perhaps comparatively happy, Cretin!" — *ib.*

Climate of Florence.

"Such is the far-famed Arno, along the banks of which the public promenades are constructed, and take, on both sides of the river, as well as at Pisa, the name of LUNG' ARNO — signifying, on the right bank, LUNG-WARMER — on the left, LUNG-HARMER. The span of the Trinita or Carraja Bridge makes all the difference between Summer and Winter in Florence. The LUNG' ARNO, on the North side of the river, being sheltered by the city from the tramontane winds, and open to the sun, is warm, or

even hot — while, at the same moment Schneider's side, being exposed to the Apennine blast, and excluded from the solar beams, is chilling cold. And yet the warm side of the Arno is the more dangerous of the two for the sensitive invalid. Thus, while pacing the promenade between the two bridges above-mentioned, the wind being northerly, the temperature will be felt very high, so as readily to bring out perspiration; but the instant we come abreast of any of the streets at right angles, such as the Piazza St Trinita, or the Vigna Nuova, we are stricken by an icy current of air, the more injurious, from the open state of the pores and the sudden transition of the temperature. On the other side of the Arno it is permanently more cold; and when the Sirocco prevails, we are exposed to currents of that debilitating and suffocating wind at the crossings of streets — but these are not dangerous. From whatever point of the compass, however, the breezes blow — along whatever street they sweep, even in this pride of Italian cities, they carry on their wings, not 'airs from heaven,' but 'blasts from hell,' saturated with reeking vapors from — all 'UNUTTERABLE THINGS.' Mr Eustace tells us, indeed, that Florence is 'airy, *clean*, and sometimes rising towards grandeur.' I deny the second assertion, and I appeal to ocular demonstration, not merely in obscure streets, but throughout every piazza and square in that great capital. Let the traveller walk, for instance, through the PIAZZA ST MARIA NOVELLA (the largest in Florence) in the middle of day, and let him halt before the obelisk in its centre. He will there see what I shall not describe. If not satisfied, let him repair to the PIAZZA DEL DUOMO itself, and there contemplate the *Pagan sacrifices* that are offered up along its sacred walls in broad noonday! Nay, I assert that the 'gates of Paradise,' as Michael Angelo styled the portals of the Baptistery, are unsafe to enter, unless we afterwards have recourse to the 'holy water' in the FONT, to purify our bodies as well as sanctify our souls. Look at the PALAZZO PITTI, the residence of royalty. It is very gloomy and very grand. The bayonet keeps its walls undefiled. But turn down into any one of the streets that lead from that splendid palace towards the banks of the Arno, and the *unaccustomed* eye will revolt from the accumulations of filth and corruption that everywhere present themselves! Such are the scenes wherein the young gentry and nobility of England are to form their taste, polish their manners, refine their senses, cultivate their understandings — and *finish* their education!" — *ib.*

EFFECTS OF ITALIAN MALARIA.

"A glance at the inhabitants of malarious countries, or districts, must convince the most superficial observer that the range

of disorders produced by the poison of malaria is very extensive. The jaundiced complexion, the tumid abdomen, the stunted growth, the stupid countenance, the shortened life, attest that habitual exposure to malaria saps the energy of every bodily and mental function, and drags its victims to an early grave. A moment's reflection must show us that FEVER and AGUE, two of the most prominent features of the malarious influence, are as a drop of water in the ocean, when compared with the other less obtrusive but more dangerous maladies, that silently but effectually disorganize the vital structures of the human fabric, under the operation of this deleterious and invisible poison. Yet the English traveller or sojourner in Italy knows little, if anything, respecting these slow and masked underminings of his health, and thinks, if he escapes the malaria fever of July and August, he has nothing more to dread, but everything to enjoy, throughout the year. Fatal mistake! The foundation of chronic maladies, that render life miserable for years, is every Summer laid in hundreds of our countrymen, who wander about beneath the azure skies of Italy. They bring home with them a poison circulating in their veins, which ultimately tells on the constitution, and assumes all the forms of Proteus, harassing its victim with a thousand anomalous and indescribable feelings of wretchedness, inexplicable alike to himself and his physician. It is the attribute, the character, of all malarious disorders to be slow in their development, when the poison is inhaled in a dilute state, or only for a short time. Many of our soldiers did not feel the effects of the Walcheren malaria, till months or even years after that fatal expedition. So our countrymen in India often go on for years in tolerable health, after exposure to malaria, before the noxious agent shows itself in the disturbance of certain functions of the body. The same thing is seen even in England, though on a smaller scale. Those who inhabit marshy or damp situations become sooner or later affected with some of the Proteiform maladies engendered by malaria, though they are seldom understood, unless they happen to take on a regular aguish character.

Two causes have a marked influence in deranging the biliary and digestive organs — solar heat and terrestrial exhalations. Either is equal to the production of the effect; but, when combined, the agency is most potent. Thus, in India and other tropical climates, when a high range of temperature combines with marsh miasmata, liver and bowel complaints are sure to result. And, under the most favorable circumstances, although hepatitis or dysentery may be evaded, the organs of digestion are sure to suffer in the end; and the melancholy catalogue of dyspeptic, bilious, and nervous complaints is the portion of the tropical sojourner. Now Italy, in Summer and early Autumn, is nearly as hot as the East or West Indies, and is the very throne

of malaria. She has also the additional disadvantages of the sirocco and tramontane winds — or, in other words, vicissitudes of temperature, great and sudden, beyond anything which we witness even under the Equator. What are the consequences? Malarious fevers; — or, if these are escaped, the foundation of chronic malarious disorders is laid, an ample provision for future misery and suffering!" — *ib.*

Climate of Italy.

'Italy, indeed, is very singularly situated in respect to climate. With its feet resting against the snow-clad Alps, and its head stretching towards the burning shore of Africa, it is alternately exposed to the suffocation of the sirocco, from the arid sands of Lybia, and the icy chill of the tramontane from the Alps or the Apennines. The elevated ridge of mountains that bisects the whole of Italy longitudinally, operates powerfully in modifying her climate.

'Against the summits of this rugged and lofty chain of Apennines the sea-breeze that has swept the Mediterranean or even the Atlantic Ocean, on one side, or the Adriatic on the other, strikes often with great violence; but is, on the whole, impeded in its course — more especially the lower strata of air; — hence the stillness of the atmosphere so remarkable at Rome and many other parts of the western plains and valleys of Italy. This stillness is by no means advantageous in point of salubrity, to a country where deleterious exhalations are hourly issuing from the soil in the Summer season, and which are dissipated by winds and concentrated by calms. Thus, then, this Apennine ridge affords no protection from the chilling blast of the Alps, or the enervating sirocco of Africa; while it diminishes the utility, by obstructing the current of the sea-breezes, from whatever point they may blow. But the Apennines themselves, when they annually resume their caps of snow, become the source of most piercing and cutting winds, more chilling than those from the Alps, on account of their greater proximity to the plains. The Apennine, therefore, is one of the agents which produce those excessive transitions of temperature, to which the atmosphere of Italy is subjected.'

'From the relative situation, then, of the Alps, the Apennines, and the sands of Africa, it may be said that almost every breeze in Italy comes over a volcano or an iceberg — and, consequently, we are alternately scorched by the one and frozen by the other.

'There is a vast difference between the *variability* of climate in England and in Italy. In England, the changes (barometrical, thermometrical, and hygrometrical) are very *frequent*, but they are also very *limited in their range*. In Italy it is just the

reverse — the transitions are *not* very frequent; but when they do occur, the range is often most extensive. Now the *frequency* of alternations in England, and the moderate range of these alternations, are the very circumstances which render them comparatively innocuous. We have cloud and sunshine, heat and cold, winds and calms, drought and rain, twenty times in one day at home; but the British constitution becomes inured to them, and safely so, from the rapidity of their recurrence and the limitation of their range. Nay, this perpetual scene of atmospheric vicissitudes not only steels us against their effects, but proves an unceasing stimulus to activity of body and mind, and, consequently, to vigor of constitution.'

'If, thermometrically speaking, we say that the Summer heat of the Italian valleys, approaches the temperature of the tropics* — while the tramontane blasts of Winter depresses the mercury as much as a Caledonian North-easter — we convey a very inadequate idea of the *feelings and the physical effects* occasioned by these opposite conditions of the atmosphere in Italy. I have alluded to this subject, under the head of Naples, and also on the journey from Genoa to Nice. The thermometer, in fact, is no index or criterion of our feelings under the influence of the Sirocco and Tramontane. The *former* appears to suspend, exhaust, or paralyze the nervous energy of the body, and the sensorial vigor of the mind; both of which fall prostrate beneath the flood of enervating steam engendered by the aërial current sweeping over burning sands and evaporating seas. The *latter*, or tramontane, comes down from the Alps or Apennines, with such a voracious appetite for caloric, that it sucks the vital heat from every pore — shrivels up the surface of the body — impels the tide of the circulation, with great violence, upon the internal organs — and endangers the lungs or whatever other structure happens to be weakest in the living machine.'

'The very circumstance, in short, which forms the charm, the attraction, the theme of praise in the Italian climate, is that which renders it dangerous, because deceitful — namely, the *long intervals of fine weather between vicissitudes of great magnitude.* This is the bane of Italy, whose brilliant suns and balmy zephyrs flatter only to betray. They first enervate the constitution; and, when the body is ripe for the impression of the Tramontane, that ruthless blast descends from the mountains on its hapless victim, more fierce and destructive than the outlawed bandit on the unsuspecting traveller!

'Italy boasts much of the dryness of her climate. In some

* "Dr. Clark states that the mean temperature of the Mediterranean generally, in the month of August is at 80° Fahrenheit, which is very littleless than the mean annual temperature of the Indian Ocean."

places, as at Pisa, there falls as much rain as in Cornwall. In Rome, about one-third less of rain falls than at Penzance, and the number of rainy days is one-third less — being about 117 in the year. This is a poor counterbalance for the *steam* of the Sirocco, and the oppressive stillness of the Roman air. The fogs of England and its cloudy skies furnish constant themes of querulous complaint; but they would be rich treats in Italy, as defences against the torrents of liquid fire that pour down on her vales from a nearly vertical sun in Summer. As rains fall in Italy more seldom than in England, they make up for this infrequency, by precipitating themselves in cataracts, that form mountain torrents, which overflow their banks, flood the plains, and saturate every inch of ground with humidity. The deluge over, a powerful sun bursts forth, and rapidly exhales into the air, not only the aqueous vapor from the soil, but the miasmata generated by the decomposition of all the vegetable and animal substances which the rains have destroyed, the floods carried down from the mountains, or the gutters swept out of the streets. If these exhalations rise into the air perfumed with the aroma of ten thousand odoriferous shrubs, breathing their balmy influence over the face of a smiling landscape, they are not the less, but the more dangerous on that account.

'Northern strangers and more especially INVALIDS, unaccustomed to an azure sky and a genial atmosphere in the depth of Winter, sally forth to enjoy the glorious sunshine or resplendent moonlight of Italy — and like the Grecian shepherds —

> ——Exulting in the sight,
> Eye the blue vault, and bless the cheerful light!

But they have, too often, reason to curse, in the sequel, the seductive climate of this classic soil, which mingles the poisonous miasma with the refreshing breeze, and thus conveys the germ of future maladies on the wings of fragrant Zephyrs." — *ib.*

ON WOUNDS OF THE THROAT. BY BARON LARREY.

[CLINIQUE CHIRURGICALE.]

Case 1. M. Arrighi (now Duke of Padua, and then aid-de-camp to General Berthier) received a musket-ball in his neck, at the siege of Acre, by which the external carotid artery was cut across, near to the place where it is given off from the internal, and as it enters the parotid gland. The gush of blood from both apertures of the wound attracted the attention of the artillery men, and one of them instantly pushed a finger into each opening, and thus arrested the flow of blood. Baron Larrey was immediately called amidst a shower of shot and shells. He applied pressure and maintained it carefully for some days, by which

means, and without any ligature, life was preserved, and all hæmorrhage prevented.

Case 2. After the battle of Waterloo, the Baron had an opportunity of seeing a young English soldier who had had the left external carotid artery *partially* opened. The hæmorrhage was alarming; but the English surgeon cut down on the aperture, and tied the artery both below and above the wound. The patient entirely recovered.

Case 3. Henry Gabon, of the Swiss Guard, was brought into the Hôpital de la Garde, on the 21st November, 1828, immediately after receiving a sabre-wound, while fighting a duel, in the upper part and right side of the neck. When the Baron arrived the man was nearly dead from hæmorrhage and suffocation. The wound was laid bare, while an assistant made pressure on the line of the artery, and then the Baron enlarged the orifice, and discovered that the superior thyroid artery was wounded as well as the external carotid itself. A cellular pouch had formed behind the thyroid gland (which was goitrous,) filled with clotted blood, and which was pressing on the trachea. The removal of these clots was followed by a jet of arterial blood. The Baron was unable to seize the vessels from which the blood issued, and therefore laid bare the trunk of the common carotid, and passed a ligature round it. He was not a little surprised to find this artery no larger than the radial artery at the wrist. This was attributed to the great loss of blood. The great source of hæmorrhage was thus cut off; but some vessel still continued to supply blood at the upper part of the wound. This vessel was fortunately seized by the forceps and secured. The wound was then cleaned and dressed. The breathing continued difficult, and the lips deadly pale. For two or three days it was doubtful whether this man would rally; but eventually he recovered.

Case 4. A grenadier of the army of Egypt was wounded by a bayonet, the broken point of which remained, for six weeks, deep in the left side of the pharynx, behind the arch of the palate. The man had entirely lost his voice. The Baron, with great difficulty, seized the foreign body and extracted it. The voice was instantly restored. The iron had pressed on the laryngeal branch of the par vagum.

Case 5. A subaltern officer of the Guards was brought into the hospital on the 7th of June, 1824, presenting a wound in the neck, on the right of the larynx, so small as to be scarcely perceptible. There was great ecchymosis and tumefaction of the whole anterior region of the neck, with deep-seated pain in the chest. Voice and speech were gone — the respiration exceedingly difficult, as well as deglutition. He informed Baron Larrey, by writing, that this wound was made by a small sword. Venesection was repeatedly employed, together with cupping and

leechings, which gave some relief. On the 6th day, however, he was menaced with suffocation, and his face was blue and bloated. The Baron found him apparently in the agonies of death. In this crisis he determined on tracheotomy. He made an incision through the integuments of some length, and then perforated the space between the thyroid and cricoid cartilages. An immense explosion of air was the immediate consequence, together with the expulsion of several clots of blood. Respiration succeeded, and considerable relief was the result. A paroxysm of suffocation, however, soon after occurred, owing to the obstruction of the orifice in the air-passage, and a tube was quickly inserted. Relief was again obtained ; but thirst was intolerable, and the unhappy patient was unable to swallow. In this dilemma, a tube was, with great difficulty, passed into the stomach, and fluids introduced into that organ. The thirst was moderated ; but he could not bear the presence of the hollow bougie, and tore it out himself. He lingered in dreadful agony, till four o'clock the next morning, when he expired.

On dissection an abscess was found in front of the three superior cervical vertebræ, (which were denuded,) the size of a hen's *egg*, and which had pressed so much the parietes of the pharynx against the cricoid cartilage and upper part of the trachea, that respiration could not be carried on through the aperture that was made by the knife. A purulent infiltration had also penetrated down into the chest, through the cellular membrane.

The Baron, in his remarks on this case, does not allude to the possibility of life being saved, if the opening had been made lower down in the trachea, instead of the place which he pitched on for the operation. In all cases where tracheotomy is deemed necessary, the lower down the operation is performed, the more difficult it is — but the greater is the chance of success, for the obvious reason that we are thus the more likely to get below the obstruction.

Case 6. General Murat (afterwards King of Naples) received, at the battle of Aboukir, a musket-shot, which traversed the neck, from side to side, wounded the root of the tongue, and carried away a portion of the epiglottis. The Baron was on the spot, and rendered immediate assistance. The first phenomenon which he observed, was the discharge of the dismembered portion of the epiglottis, followed by a considerable expectoration of frothy blood. The General was harassed for some days with painful cough, loss of voice, &c. The Baron cleared the orifices of the wound both at its entrance and exit, and then introduced an elastic tube into œsophagus, for the purpose of introducing liquid nourishment and drink into the stomach. This was necessary, as there was no proper valve to prevent the ingress of substances into the trachea. In the course of eighteen days,

however, the parts had so accommodated themselves to the loss of a portion of the epiglottis, that this officer was able to swallow with little or no inconvenience.

Case 7. In this case, which was that of a soldier in Egypt, who was wounded by a musket-ball on the 21st of March, 1801, the whole of the epiglottis was carried away. The poor fellow was devoured by thirst, but could not drink, and harassed with incessant cough. In this dreadful state he continued four days, without any relief. When Baron Larrey saw him he was in the most piteous and dangerous condition. The Baron was enabled to pass a gum-elastic tube down the œsophagus, and through this to introduce liquids into the stomach. By a long and assiduous perseverance in this measure, the life of the soldier was saved, and nature supplied the place of the epiglottis by a contrivance of her own.

Two other cases, nearly similar, are related by the Baron, but the foregoing are, we think, sufficient for the elucidation of the present subject. In another short article, we shall give some cases of wounds of the œsophagus, from the same ample source of information.

Rheumatic Affection of the Chest.

Diagnosis between it and Pleuritis. By Dr. Elliotson, physician in St Thomas's Hospital.

In a late clinical lecture on pleuritis, Dr Elliotson introduced a case of Rheumatic inflammation of the parietes of the chest, by way of comparison or contrast with phlogosis of the pleura — a comparison which is not useless, since the one disease is very often confounded with the other, to the detriment of the patient, by the unnecessary effusion of blood thereby occasioned.

Case. William Key, æt. 19, in William's ward, had been ill a fortnight. At first he had a rheumatism of the left knee, and he now and then has it there still; but he has it particularly about the left acromion, all over the same shoulder, clavicle, and front of the chest. There is great pain of the chest, and considerable tenderness on pressure; and great pain on inspiration, but no cough and no expectoration. Now the existence of pain in the chest, rendered severely cutting on inspiration, might give the idea that the person was laboring under pleuritis. The two diseases, however, are very easily distinguished by any one who has seen rheumatism of the chest before. The diagnosis was this: the pain was not confined to one spot, but more or less diffused over the front of the chest generally; it is rare for the pain of pleuritis to be so diffused. In the next place, there was great heat of the part; in active rheumatism there is generally heat of the part, whether it be situated in a joint or in any other portion

of the body. Farther, the pain was increased by the very slightest pressure, such as could not influence the pleura; and not merely between the ribs, but on them — even on the sternum, where the pleura, again, could not be influenced. In pleuritis the pressure must be between the ribs, or if on the ribs must be very strong to give pain, unless in the most violent cases, where the whole parietes suffer as well as the pleura. The pressure which produced pain in the woman was between the ribs, but in this man the least pressure on the ribs themselves, or even upon the sternum, produced great distress. Fourthly, rheumatism existed also in other parts. From the combination of all these symptoms, particularly from the third, I inferred the nature of the disease. The heat and the diffused pain alone would not have shown the nature of the disease, because sometimes in pleuritis both those symptoms are present. The fact of rheumatism being in the shoulder would not alone have been decisive, because in some cases of pleuritis we have pain also about the axilla. Nay, the rheumatism in the knees, or other parts, would not have been decisive because a person may have both pleuritis and rheumatism. The same cause that produces the one disease may produce the other, and is commonly in both — the application of cold, especially with moisture, and when the body is overheated. Taking, however, all these symptoms conjointly, there can be no doubt about the disease. He had no cough, no expectoration — and this still farther illustrated the true nature of the disease; though in some instances of severe rheumatism of the chest there is accidentally a very slight catarrhal affection, which produces a little expectoration — just as much as is often seen in pleuritis. The man was not ordered to bed, and he showed no distress of countenance; yet in some cases of rheumatism of the chest I have witnessed such indisposition as to confine the patient to bed: for acute rheumatism anywhere, and therefore in the chest, may occasion this; and I have seen the pain on breathing so great as to occasion much anxiety of countenance.

The *treatment* of the two diseases would be exactly the same in principle; but in the case of rheumatism there would be no occasion for the adoption of such active measures as in the case of pleurisy. Whether a nice diagnosis is necessary or not in any disease, it should invariably be made, because we should always practise our art in the best manner; but there are two reasons why it is important to make a careful diagnosis here; in the first place, in order that you may be enabled to inform the patient and his friends whether there is danger or not — pleurisy being dangerous, while rheumatism is not, except it attack some vital part; and secondly, because, although you employ the same measures in the two diseases, it is not requisite in rheumatism to employ them to the same extent. I ordered no general bleeding

for this man, but thirty leeches to be applied on the front of his chest; and as he had rheumatic pains about the shoulder and other parts of the body, I judged constitutional measures requisite — gave him five grains of calomel night and morning. The leeches completely relieved the front of the chest, but the next day I found the same pain in the opposite shoulder (this is the character of acute rheumatism, to leave one part and fly to another,) and I ordered the leeches to be applied there. On the following day I found the rheumatism in the neck, and I had leeches applied to that part, and to-day found him infinitely better. He had gone out of doors contrary to my wishes, and has a little sore throat, and still pain in the right shoulder; but the chest is liberated from the disease, and there is little now the matter with him.*

In a preceding part of the same clinical lecture, Dr Elliotson details minutely a case of pleuritis, and, in fact, gives a dissertation on the complaint, delineating its symptoms as revealed by the common phenomena presented to the eye, and the auscultic indications drawn from the stethoscope. We are glad to see auscultation thus publicly taught in one of our greatest hospitals. Ten years ago we would have been laughed at, if we had predicted such an event. What! That wooden bauble! That tom foolery! That piece of QUACKERY, introduced into a lecture by any respectable physician! Oh no! the thing is impossible.

Two Cases where Death was Occasioned by Excessive Loss of Blood. Dr Elliotson.

In a clinical lecture delivered by the above talented physician, as reported in the MEDICAL GAZETTE, we find the following cases, which we shall separate from the commentaries made on them.

Case 1. "Abraham Dick, æt. 39, a bargeman, in consequence of violent pains of the head and epistaxis for the preceding fortnight, was cupped at the back of the neck, and between the shoulders, on the 21st ult. with great relief. The day after the cupping, during a fit of vomiting, the scarifications began to bleed afresh, and hæmorrhage ensued to such an amount, in spite of all efforts to stop it, that a very large quantity of blood was lost, and he was therefore brought to the hospital on the 26th, laboring under its effects. There can be no question about the propriety of the cupping, for he had vertigo, drowsiness, violent pain of the head, and the cupping relieved all the symptoms; so that it was the accidental circumstance of hæmorrhage after the

* Med. Gazette.

bleeding that did the mischief. It appeared that besides this affection he had been subject to vomiting, and likewise to a little cough, but particularly to fits of vomiting, which most likely depended upon the state of the head. The vomiting, however, by the bleeding grew worse, and everything he took was rejected from the stomach, the act of vomiting being attended with considerable pain. The countenance of the patient corresponded with the effect produced by loss of blood; he was pale, straw-colored, and complained of great debility, unable to stand or walk; his pulse was low and feeble; he likewise complained of great thirst, which is a common occurrence when there has been any great loss of fluids either by sweating, purging, great flow of urine, or blood-letting. He had now no pain of the head, but on setting up or moving about there was giddiness; this, however, passed off the moment he was laid down. He felt chilly, and sometimes almost fainted; he was also restless and anxious, and his hands were tremulous when I first saw him. On feeling his pulse while he reclined, and also after making him sit up, I found there was a considerable difference, for the moment he sat up the pulse became weak and irregular, but as soon as he again was laid down, it became fuller and regular. I repeated this experiment, and found the same effect; but on a third trial the same circumstance was not observed.

He came in after I had made my visit on the evening of the 26th of October, and he was very properly ordered laudanum and good nourishment. He took thirty minims of tincture of opium, and he was ordered two pints of beef-tea, and two of milk. The case was not one of great intensity, but was decidedly a case of the ill effects of the loss of blood. He was likewise ordered a tonic, certainly one of the best in restoring the system when it has lost an abundance of blood — iron, and in the form of the subcarbonate. This will not act quickly; so that if you want to produce an immediate effect, this would not be a proper remedy. As in the present case, however, there was no immediate urgency, it was very proper to administer the iron, any immediate benefit being intended to be derived from the opium. At his admission the sacrifications were bleeding, but the flow was arrested by pressure. On the 27th it was found that he still vomited; that all his food was rejected; and that he had great pain in the scrobiculus cordis at the moment of vomiting, but at no other time. The pulse was said to be 88 and full, and there was thirst. He appeared to revive at night, but at four o'clock in the morning he coughed, and the hæmorrhage was renewed to such a degree that it was necessary to call the dresser, who again stopped it by pressure. At noon, the vomiting became no better, half a grain of opium was prescribed in substance in the room of the tincture, which had been rejected from his stomach. This quantity of

solid opium was ordered to be given every four hours; and from the first dose the vomiting was in some measure checked, and the opium was no longer rejected. He slept that night, and on the following day it appeared that he had vomited only four times during the twenty-four hours, and that was on coughing or taking food, which is a common circumstance when persons have been subject to severe vomiting. There was less pain when he vomited, and less tenderness also in the epigastric region; it appeared, therefore, that there was rather morbid irritability than an inflammatory condition of the stomach. He still complained of giddiness, but his headache was now but slight; his pulse was 80, full, and rather sharp; hands still tremulous. On the 29th he had slept better, and had only vomited once, showing the propriety of the treatment. If the vomiting had been supposed to be inflammatory, and there had been considerable and constant tenderness on pressure, leeches would have been applied; but that would have made him worse; whereas, by giving him opium, he was, so far as the vomiting was concerned, better. On the 28th, as he complained of want of sleep, I preferred a full dose to the smaller ones, and substituted for them three grains at once, at bedtime; and I allowed him ʒ iv. of wine in the twentyfour hours. A clyster was required on the 29th: I found that he had vomited but once, had slept better, felt stronger. The three grains of opium, the wine, strong beef-tea, milk, and iron, were ordered to be continued daily. On the 30th, the report is that he had been rather restless, and complained of a good deal of giddiness; his bowels had been opened by a clyster, which has made him feel better; he had vomited only four times the last twentyfour hours, and that was when he coughed: the pulse was softer. On the 31st he had passed a very bad night, through great restlessness and anxiety. He had also wandered in his conversation, and attempted to leave his bed. At two o'clock, A. M. his nose began to bleed, and continued to do so at intervals till six in the morning, though measures were used to stop it; he lost, however, not more than two or three ounces of blood. At midnight his pulse was very variable at one time, and seemed to be rather full and compressible, and at another time it was almost indistinct. The sister of the ward said that fits of palpitation of the heart came on so violently, that they caused the bed to shake, and that his breathing was performed with great noise, like that of croup, during his sleep. I presume it was stertorous. He was given half a drachm of liquor ammoniæ subcarbonatis every three hours, and three ounces of brandy at intervals, by which he was much relieved, and towards morning he was considerably better. But on visiting him at four o'clock on Sunday afternoon, his countenance was still very anxious, and he wandered in his conversation; there was rather more tremor in his hands, and the pulse

was sharp and variable, sometimes being a mere thread. At nine o'clock in the evening he was lying perfectly insensible, his eyes fixed, his pupils contracted, his pulse slow and feeble, and respiration taking place at long intervals. He died at half-past ten o'clock."

There was no dissection.

Case 2. "The other case which I shall mention occurred among the women; and the affection of the head from the loss of blood proceeded to actual convulsions, and considerable difficulty must have been experienced in ascertaining the nature of the case. This woman was nineteen years of age, and had had two children. She was brought to the hospital on Thursday in a state of insensibility and convulsions; and it appeared that she had been delivered of a child seven weeks before. She was in convulsions of an irregular character, with insensibility and stertorous breathing. She was seen and prescribed for after my visit; sixteen ounces of blood were taken from the back of her neck, and fifteen grains of extract. coloc. c. were administered, together with an injection; and a cold lotion was applied to her head. No information was given respecting the history of the case: all that was said by the friends was, that she had been seized with convulsions that morning, and became insensible. The natural conclusion certainly was, that this was a case of determination of blood to the head, and the proper indication of cure was to take away blood from the head. The head, too, was hot; and had she been prescribed for myself, I have no hesitation in saying that I think it more than likely that I should have treated her in the same way. Her pulse was full; she had lain-in seven weeks; the head was hot; she was in a state of insensibility and convulsions, and the breathing was stertorous, and had she died that day without being cupped — without having blood taken from the head — I think, had I been the person, I should have blamed myself. But it turned out, when more of her history was known, that the propriety of the treatment was doubtful. When I first saw her the following morning she was in a state of convulsion, with moaning, stupor, and stertorous breathing. Luckily for me, the gentleman who had attended her in her confinement had come to the hospital to see her, and he informed me that she had had excessive flooding in her labor, and that it had been necessary to turn the child, and that at the time of this hæmorrhage she had a degree of convulsions similar to those now present. He also told me that, although seven weeks had elapsed, she had never recovered her color; and I certainly found her of a deadly white; but notwithstanding that appearance, had I seen her the day before, I should have considered her as a person in an epileptic state, with great stupor, and a tendency to apoplexy, and ascribed the paleness to the epilepsy, in which I

have often seen persons ghastly and pale. I found her pulse full, and I should have thought from first feeling it that it justified me in taking blood, at least from the head, had I not been informed by this gentleman that she had had previous flooding, and had I not noticed that besides the fulness the pulse had a peculiar sharpness: certainly it was a hæmorrhagic sharpness, but it was likewise so full as to make me hesitate for a moment, and consider whether I ought not to apply leeches to the head. However, while I was standing at the bed-side considering the history of her case, and taking all the circumstances connected with it into consideration, the character of the pulse altered; it actually became a little irregular, and decidedly weaker, and I very soon saw clearly that it was a case of exhaustion — convulsions from loss of blood.

The treatment to be adopted was at once indicated, namely, to give stimuli and nourishment. I administered, at first, twenty minims of liquor ammoniæ in camphor mixture; and on watching its effects, I perceived that it scarcely stimulated her. I repeated it in about twenty minutes, with half a drachm of tincture of opium. I waited perhaps twenty minutes more, and during the whole of this time the pulse was regularly sinking, becoming weaker and weaker, and losing its sharpness: she became colder, and a difficulty of swallowing supervened, so that nothing could be taken into her mouth. I sent for the stomach-pump; but as the stomach, being very weak in these cases, frequently becomes so irritable as to reject nourishment, and render the subsequent administration of medicine and other stimulants fruitless, I attempted to nourish her per rectum, and a quantity of strong beef tea, with four eggs beat up in it, was thrown up the intestines; but the whole was immediately rejected; it was scarcely thrown in before it was discharged. Under these circumstances I at once employed the stomach-pump; and by its means some brandy, wine, and more laudanum, were got into the stomach. I staid in the hospital some few hours, and in the course of that time a considerable quantity of brandy was got down; but she regularly sunk, none of the stimulants making any impression upon her, except in one instance, when the pulse rallied, though in a very slight degree, for a few minutes. With that exception, the decline of life was steady and progressive; the breathing became slower, and in the afternoon, about four o'clock, she expired.

No dissection of this case could be obtained, which is the more to be regretted, as we apprehend it would have shown some curious appearances. But we do not consider ourselves justifiable in stating more than bare facts, leaving our readers to judge for themselves.

Pathological Appearances presented in the Bodies of the insane Dead.

1. *Case of Cheerful Monomania.* The dura mater much injected, and adhering in many places to the pia mater — the latter softened — the brain pale, and rather softer than natural — cerebral convolutions effaced — right ventricle full of water — cerebellum and spinal marrow sound — lungs disorganized — stomach and intestines livid, with gangrenous spots — liver softened.

2. *Melancholic Monomania with tendency to Suicide.* Membranes of the brain gorged with blood — no other unusual appearance in the head or chest — small intestines inflamed, as was the whole mucous membrane of the digestive tube, from the mouth downwards — many aphthæ in this track — liver enlarged and indurated — biliary concretions in the gall-bladder — spleen enlarged and indurated.

3. *Mania with Chorea.* Effusion under the arochnoid — cerebral substance hard and much injected — sanguineous effusion into the spinal canal, with traces of inflammation along the spinal marrow — all the other organs sound.

4. *Mania which terminated in Idiocy.* Some points of gangrenous aspect in the small intestines — brain very much softened, with much serum in the ventricles — nothing unusual in the other organs.

5. *Suicidal Mania.* Meninges and cerebral substance highly injected — heart large — traces of phlogosis in the digestive tube, especially in the duodenum and jejunum, whose parietes were thickened.

6. *Mania with Pride.* Meninges thickened and injected, having the appearance of parchment — strong adhesions between the two hemispheres — brain itself much injected — intestinal tube slightly inflamed.

7. *General Mania.* Much effusion between the membranes of the brain — pia mater inflamed even to suppuration — cerebellum sound, as were the thoracic and abdominal viscera.

8. *Melancholia.* Considerable inflammation in the small intestines — cerebral meninges injected — the other organs sound. — *Annale Universali de Medicina*, 1830.

These appearances only prove that the insane will not die, no more than the sane of mind, without some corporeal disease, which almost always leaves traces of its existence in the dead body. But they throw little light on the cause of the maniacal or monomaniacal phenomena. We can hardly doubt, indeed, that the functions of the mind can be disturbed, without some antecedent or cotemporaneous disturbance of a corporeal structure — and we may suspect the seat of the functional disturbance in the

early part of the malady, by finding traces of altered structure after death. Yet it is only surmise, and not proof. Suppose the primary irritation which disturbs the judgment or reason of an individual be seated in the digestive tube: — that irritation may have ceased long before death, but long after the irritation was seen established in the brain or its membranes, where we find the traces of death on dissection. To one conclusion we may safely come, namely, that in every kind of mania, there is a bodily irritation somewhere, and that the brain or organ of thought must become either primarily or secondarily affected, before the phenomena of insanity show themselves.

Reports of the Lunatic Hospital at Turin.

Anthelmintics.

This term is applied to substances intended to destroy, and to expel from the body, intestinal worms. In order to acquire a full knowledge of the manner in which these substances operate, and of their practical utility, we ought to make ourselves familiar with the natural history of intestinal worms; but as this information is given under a distinct head in this work, we shall confine our remarks, in the present article, to the means of relieving the body from these parasitic animals.

The remedies belonging to this class of the Materia Medica are various, and on this account we regard that arrangement the most useful, in a practical point of view, which refers to their mode of operation. The whole class may be conveniently arranged under three heads: — *evacuant* anthelmintics; *specific* anthelmintics; *corroborant* anthelmintics.

I. *Evacuant* anthelmintics are substances which dislodge and expel worms from the intestinal canal, whether by a mechanical, a chemical, or a cathartic action.

1. Among those evacuant anthelmintics which operate mechanically, we consider two preparations only worthy of notice, — granulated metallic tin, and the setæ of the pods of the dolichos *pruriens*. Tin, *stannum*, appears to have been used as an anthelmintic, in combination with common salt and some other purgatives, by Paracelsus; and it is mentioned also by Quincy, as a vermifuge; but it was particularly introduced to the notice of the profession, in 1736, by Dr Alston, who prescribed it, for the first dose, to the extent of an ounce, mixed in treacle; for the second, which was not administered until three days after the first, half that quantity; and then finished by giving a purgative, which generally brought away the worms. It is now prescribed in much smaller doses; not more than a scruple, or at most a drachm, being given for a dose; but this is repeated three or four times a day for four or five successive days, and is followed by a brisk cathartic. We have found it useful chiefly in those

cases in which the ascaris *lumbricoides* was present. Lewis and many others erroneously attribute the benefit derived from this employment of tin to the arsenic which it frequently contains; others ascribe it to the tin being solvent in the gastric juice, and thus forming hydrogen gas, which is poisonous to the worms; an opinion which is supposed to be supported by the efficacy of the aurum musivum, sulphuretted oxide of tin, which was formerly much employed as an anthelmintic. In France a nearly similar opinion of the poisonous nature of tin is maintained; for wine exposed in tin vessels is prescribed as a vermifuge. One forcible argument against these opinions is derived from the fact that the worms are generally voided alive; and there can be very little doubt that the benefit is derived solely from the mechanical irritation of the worms by the grains of the tin — an opinion which is rendered more probable by reflecting on the manner in which lumbrici dispose themselves in the canal. "The dissection of one subject has shown me," says Mr Rumsey, "that they dispose themselves in the most curious and tortuous form, such as I thought exactly adapted to the exertion of their muscular power against opposite sides of their cylindrical abode; resisting, by this means, the effect of the propelling motion of the canal, and thus keeping their station. An illustration of this mode may be found in the art employed by a chimney-sweeper to counteract the effects of gravitation by pressing against opposite sides of the cylinder in which he exerts his skill." The irritation excited by the tin prevents them from retaining this position, and causes them to be easily expelled. The other mechanical agent well adapted for expelling the round worm, ascaris *lumbricoides*, is cowhage, dolichos *pruriens;* a very common anthelmintic in the West Indies. The setæ on the outside of the pods are scraped off, after sheathing them by dipping the pods in syrup, and then formed into a kind of electuary, which is given in doses of one or more teaspoonfuls, early every morning, for three successive mornings; this is followed by a brisk cathartic. The setæ, in the same manner as the tin, wound and irritate the worms, obliging them to leave their hold on the coat of the intestine, — at least this is the usual opinion of their mode of acting. A desert spoonful of the electuary is given to an adult, fasting, for two successive mornings: many worms are usually evacuated after taking the second dose, particularly if the long thread worms be present. The cathartic is generally requisite to aid their expulsion, and if it consist of calomel and scammony, any ascarides present in the rectum are expelled at the same time. Neither the powder of tin nor the cowhage are now so generally employed as they formerly were.

2. The chemical anthelmintics of this (the evacuant) division operate in two ways; either purely chemically, by dissolving the viscid mucus or slimy secretion in which the worms are involved;

or, besides doing so, also by stimulating the mucous membrane, and by improving the nature of the secretion, preventing the accumulation of the slime. Lime water and pure alkalis may be regarded as almost simple chemical vermifuges; the former is perhaps more useful, especially for removing the ascarides, when it is administered as an enema. When taken into the stomach, the dose should not be less than four ounces; and it is useful to combine it either with infusion of gentian or of chamomile flowers. If the solution of the alkalis, or their carbonates, be employed, the dose should be carried to its utmost extent, beginning with small doses; for example, from twenty to thirty minims, and gradually increasing the number of minims daily until two drachms or more be taken twice a day. The alkalis also may be given in bitter infusions, that of tansy for instance, and combined with some essential oil in the form of an oleo-saccharum.

3. The purgative anthelmintics have no other effect than clearing away the superabundant mucus, and such worms as are detached from the coats of the intestinal canal, and can be expelled in conjunction with the mucus. Amongst the saline purgatives, common salt and sulphurous waters, such as those of Harrogate, have been found most useful. The common salt combines a tonic with its purgative property; it may be given in doses of a scruple to an ounce, dissolved in a large quantity of water; or double the quantity may be exhibited in the form of enema, when the rectum is much infested with the ascarides *vermiculares*. The Harrogate water, besides purging, operates as a poison to the worms by the evolution of the sulphuretted hydrogen gas which it contains. Rhubarb, scammony, and colocynth, operate as simple evacuants; and, for the same reason, gamboge is sometimes employed: they are generally ordered with the view of operating as cathartics, after the employment of other anthelmintics. One of the most common of the means of expelling worms in children is, to give a large dose of calomel at bed-time, and on the following morning an ample dose of scammony with sulphate of potassa: a large portion of bile is thus brought down into the bowels, which aids greatly in discharging the mucus of the intestines. In the cases of children, indeed, active purging is borne with much less inconvenience than in those of adults; and the first object is always to effect as much as can be done by cathartics, and then to have recourse to other means.

II. *Specific* anthelmintics are substances which destroy the worms by some poisonous principle. The Materia Medica is rich in such articles, but many of them have been overrated, and are little worthy of notice; we shall, therefore, bring before our readers those only which experience has ascertained to be valuable. The rectified oil of turpentine, the best of these specifics, was introduced into practice by Dr Fenwick, for the destruction of the tape-worm. It is usually given in doses of a fluid ounce,

or an ounce and a half, which sometimes produce sickness and purging, and occasionally intoxication, but rarely tenesmus or strangury; for in large doses its cathartic influence evidently stands in the way of its absorption, and prevents, in particular, its effects on the unrinary passages. In some habits large doses cause a sensation of chilliness and a tendency to sleep; this has been, in some instances, partially obviated by administering the oil soon after a meal. In almost every case treated with oil of turpentine, which has come under our notice, the worm has been expelled lifeless, and of a livid hue; the poisonous quality of the oil on these parasites is therefore obvious. In a few instances we have had occasion to aid its purgative effects by castor oil, which appears to answer extremely well; indeed this oil has been lauded by Drs Odier and Dunant, of Geneva, as a specific in tænia.

The beneficial effect of oil of turpentine in tænia, led to its employment as a remedy for the destruction of other worms. In the hands of Mr Rumsey and others, it has been found very successful in cases of lumbrici, when given in smaller doses. To a child of about three years of age, it was given in doses of half a drachm, mixed with four drachms of thin mucilage of gum arabic, twice or three times a day; and "continued a week, with some interruptions, within which space one hundred and twenty, mostly full grown, lumbrici, were brought away." It has also been prescribed in the form of enema, to the extent of half a fluid ounce, sheathed with mucillage of starch, for removing the common ascarides from the rectum: some caution is requisite in this mode of using it; but when it can be administered, the worms are discharged in great abundance.

The powerful poisonous influence of tobacco on animal life has induced some practitioners to employ it as a vermifuge in cases of ascarides: it is thrown into the rectum, both in the state of infusion of the dried leaf, or as smoke. In either form, the danger attending its employment is sufficient to cause its rejection from the list of anthelmintics.

The root of the male fern was employed as an anthelmintic as early as the time of Dioscorides: it was afterwards neglected, and occasionally revived, until the success of Madame Nouffler's practice, in the eighteenth century, established its reputation as a remedy for tape-worm. According to Madame Nouffler's directions, three drachms of the powdered root were given in the morning, after the patient had been prepared by the exhibition of an enema on the preceding night; and two hours after the dose of the fern-root had been taken, a bolus, consisting of twelve grains of calomel, twelve of scammony, and five of gamboge, was also administered. This practice proved frequently successful; but, with Cullen, many practitioners have attributed the benefit chiefly to the purgative; an opinion, however, which has

been shaken by the analysis of the fern-root by M. Peschier, of Geneva, who discovered in it a volatile oil, to which he attributes all its activity. Thirty drops of this oil are equal to three drachms, or a full dose, of the powder: it may be given either in the form of an oleosaccharum made into an emulsion with almond mixture, or of pills made with crumb of bread. One half of this dose is given at bedtime, and the other half on the following morning, on the empty stomach; and if it do not purge, a dose of castor oil should be given in the afternoon of the same day. The success of M. Peschier with this oil appears to have been considerable, and has been confirmed by the experience of others. In every instance the worm was voided lifeless; whence we may infer the accuracy of the opinion, that it is this oil which acts as a poison when the powder of the fern-root is administered.

The bark of the geoffroya *inermis*, or bastard cabbage-tree of Jamaica, and the powdered roots of the Indian pink, spigelia *Marylandica*, have been stated to be as certain anthelmintics for the removal of lumbrici, as the oil of turpentine and the male fern for that of tænia. The former was introduced to the notice of the profession by Mr Duguid, of Jamaica, and was much extolled by Dr Wright, who published the botanical characters of the plant. The best form of exhibiting it is that of decoction, made by boiling an ounce of the bruised bark in two pints of water, down to a pint. The dose for an adult is two fluid ounces, which generally purge, producing also a slight degree of nausea; but if cold water be drunk during its operation, violent vomiting and much fever supervene, which, however, are quickly relieved by purging with castor oil, and the free administration of warm water, acidulated with a vegetable acid. Although the active principle of this bark is still unknown, it is very evident that it operates as a specific poison to the worms; and this opinion is confirmed by the fact that, when it is tardy in its operation and requires the aid of a purgative, its anthelmintic effect is more decided. It is seldom employed in England.

The Indian pink appears to operate in its recent state as a narcotic, unless it be given in doses sufficiently large to secure quickly its cathartic influence; but in the dried state in which it is usually found in this country, its narcotic property, if it possess any in this state, is exhausted in the destruction of the worms, as we have never perceived its effects on the system of the patient. It is administered in powder, in doses of from ten grains to a drachm; but as far as our experience has gone, it requires the aid of some other purgative to secure its anthelmintic influence in moderate doses; and the violent effects of a large dose are too hazardous to be recommended.

The only other anthelmintic of this division which requires notice, is one which has been very seldom, if ever, employed in this country; and we bring it before our readers only because

we have seen its active principle, *veratria*, operate in expelling lumbrici, when it has been administered, with another intention, in the form of wine of colchicum. The seeds of the veratrum *sabadilla*, the substance to which we refer, have been long celebrated on the continent as a specific in tænia *lata*, and are much extolled by Sééliger and M. Brewer. The latter prescribed the powdered seeds in doses of three grains, which were taken on an empty stomach in the morning, for eight successive days; and these, on the ninth day, were succeeded by a strong dose of gamboge and valerian. It is not easy to explain the beneficial effects of this plan of treatment without referring it to the veratria, which, besides acting as a direct poison to the worm, stimulates the gall ducts, and, bringing a large portion of acrid bile into the duodenum, sweeps out the dead worms. In this manner we have seen the wine, and the other preparations of colchicum, operate, in expelling lumbrici; but we have had no experience of their influence in tænia.

III. It only remains to notice the last division of this class of medicines, *corroborant* anthelmintics. All the substances, in the first divisions, act merely upon the worms already existing in the intestines, either destroying them or expelling them in a living state; thence the necessity of adopting means for preventing their recurrence; and as debility favors their production, it is obvious that tonics are indicated. All the bitters may be employed for this purpose, but the chalybeates have with much reason been preferred. At one time it was supposed that the preparations of iron are poisonous to worms, an opinion founded upon the observation that the earth-worm dies when submersed in chalybeate solutions: but the fact that the earth-worm respires by the skin, which is not the case with intestinal worms, was over-looked; and it is now generally admitted that the chalybeates operate as anthelmintics by their tonic influence, strengthening not only the alimentary canal, but the whole system. Among the preparations of iron, the sulphate was extolled by Boerhaave, who gave it to the extent of a drachm, dissolved in a pint of water, in divided doses, within twentyfour hours. We have found the milder preparations, particularly the tartarized iron, operate more favorably with children and females, who, as we have already said, are the chief subjects of worms. After clearing the bowels with a large dose of calomel and scammony, we prescribe the tartarized iron, in doses of a fluid drachm of the solution, to be taken three times a day; but the wine of iron, in similar doses, or the tincture of the acetate of iron, of the Dublin Pharmacopœia, in doses of fifteen or twenty drops, given in milk, will answer the same purpose. In cases of ascarides, chalybeate water, such as that of Tunbridge, has been found to be extremely useful when administered as an enema. — *Clyclopædia Practical Medicine.*

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—Willis.

Art. I.—Medical Statistics and Bills of Mortality, for Boston, during nineteen years ending January 1st, 1832.

By D. Humphreys Storer, M. D.

The complaint has been very generally made by the members of the profession in this city, that they have no correct bills of mortality; that the few registers to which they have access, are not only very limited in their extent, but filled with numerous and glaring errors; that they are, in a word, unable to draw, from any existing tables, those data which are of so much value, and which should be within the reach of every practitioner.

No one, who has not examined the yearly "General Abstract of the Bill of Mortality for the City of Boston," can imagine how improperly these bills are kept — nor how much attention is necessary to arrive at the least important fact. It is not an uncommon circumstance to find in the same bill, deaths from *phrenitis*, *inflammation of the brain*, and *brain fever;* or *consumption*, *decay*, *marasmus*, and *debility*; or *liver complaint*, and *diseases of the liver;* or *fits*, and *convulsions;* or *croup*, and *cynanche trachealis;* or *puerperal fever*, *parturition*, and *child-bed diseases.*

Fully sensible, by repeated disappointments in my investigations, that our bills of mortality have been most shamefully neglected, I have, after considerable labor, prepared a few limited tables, trusting they may not be unacceptable to my brethren.

TABLE I.

Statement of Deaths in Boston, for a series of 19 years, viz. from January 1st, 1813, to January 1st, 1832. Containing the amount for each year, and number which has occurred from the most prevailing diseases.

Years.	Whole No. of deaths.	DISEASES OF THE LUNGS.			FEVERS.								INFLAMMATIONS.								DROPSY.			
		Consumption,	Acute Affection,	Total,	Bilious,	Typhus,	Inflammatory,	Malignant,	Intermittent,	Scarlet,	Spotted,	Type not defined,	Total,	Brain,	Lungs and Chest,	Stomach & Bowels,	Liver,	Spleen,	Bladder & Kidneys,	Heart,	Erysipelatous,	Neither organ nor type named,	Total,	Brain,	Chest,	Organs not named,	Total,
1813	786	193	48	241	6	38	3	1					48		48		5		1		1	63	2	2	17	21
1814	727	153	29	182	6	77	3						86	1	29		5					42	3		17	20
1815	851	190	69	259	2	34	2	15					53	3	69		4					89	3		14	17
1816	904	180	68	248	10	15	7	11					43	1	68		5					85	12		12	24
1817	907	231	51	282	12	157	2						171	6	51		3					89			36	36
1818	971	138	39	177	7	112	5	1	1	1		2	129	1	39		5					52	4		23	27
1819	1070	174	49	223	10	108		33		4			155		49		7					80	23		23	46
1820	1103	220	28	248	6	43	3	1	1	10	1	5	70	7	28	5	7					71			14	14
1821	1420	192	31	223	10	42	2			1		1	56		31	10	3	1				116	6	2	32	40
1822	1203	166	46	212	10	24	6	2				4	46	17	46	5	7					122	1		43	44
1823	1154	183	42	225		27	12		1			3	43	16	42	15	9					122	9	5	18	32
1824	1297	244	80	324	14	46	2	1			1	9	73		80	16	1			7		185	33	14	12	59
1825	1450	220	73	293		54		1	1	7		12	75	3	73	15	16		1	2	1	186	38	3	28	69
1826	1254	231	49	280	11	31	6	1		12		11	72	3	49	25	5					134	29	10	32	71
1827	1022	178	39	217	3	24	2	2		7		5	43	20	39	12	3			1	8	4	120	24	6	25	55
1828	1233	217	90	307	16	31	2	1	2	3		9	64	17	90	35	2				3	4	192	38	1	20	59
1829	1221	203	94	297	6	28	1	2	1	4		3	45	21	94	21	11	1	1			11	172	42	4	12	58
1830	1125	193	70	263	4	23	1		1	1		10	40	9	70	14	1		1			1	128	48	5	15	68
1831	1424	203	101	304	4	21	2		1	84	1	13	126	18	101	18					2	3	188	51	4	28	83
Total	21122	3709	1096	4805	137	935	61	72	9	134	3	87	1438	143	1096	191	89	2	4	10	15	26	1576	366	56	421	843

TABLE I.—Continued.

Years,	BOWEL COMPLAINTS							Convulsions,	Croup,	Quincy,	Hooping Cough,	Measles,	Rheumatism,	Small Pox,	Asthma,	Apoplexy,	Palsy,	Insanity,	Drunkenness,	Suicide,	Cancer,	Gravel and Stone,	Part. and Childbed,	Epilepsy,	Still Born,
	Cholera,	Dysentery,	Diarrhœa,	Dyspepsia,	Colic,	Other affections,	Total,																		
1813	5	5		16			26	21	1	8	1				1	15	6				1		5		36
1814	3	4					7	12	3	10	5					3	9	2		1			6		32
1815	1	12		1			14	17	6	7	2	21		4		3	11	2		6	5		4		21
1816	5	6		18			29	16	6	16	9	6	3			18	8	2	3	4	2		12		31
1817	8	23		12			43	36	11	6	19		7			17	6		3	3	11	3	3		33
1818	3	4		12			19	24	5	4	1	1				9	6		2	4	3	1	4		46
1819	18	12	1	2			33	15	17	4	3		6			6		3	11	4	3	1	2		89
1820	14	14	3	11			42	15	3	6	24		3			10	16	2	31	6	1	1	8		89
1821	15	62	9	3		1	90	19	11	5	26	149	6		1	7	22	4	30	2	3	2	7	1	99
1822	5	31	9		3	1	49	8	11	7	5	3	2		2	6	10	2	25	5	8		9	2	115
1823	15	25	12	3	1		56	19	14	5	17		2		1	11	5		17	3	3		5	1	109
1824	18	45	24		2	26	115	27	30	11	13	2	9		2	9	12	2	26	5	3	1	13	2	89
1825	24	56	4	7	4	3	98	48	24	3	27	77	6	1	2	12	14	10	30	4	7	2	17		88
1826	17	47		1	4		69	45	24	5	23	10	4		1	10	9	1	43	5	5	4	12	1	87
1827	8	23	3	1	2	19	56	23	25	2	6		4	3	2	10	6	5	26	4	4	2	11	3	83
1828	26	29	2		3	3	63	31	25	1	40		2	2	1	18	10	1	41	9	4	1	14		74
1829	1	20	1		3		25	28	35	3	11	72	3			12	11	3	30	5	3	2	17	2	65
1830	20	22	1		2	8	53	27	42	4	16	13	2		1	12	14	4	19	8	6	1	16		100
1831	21	28	1		4	13	67	29	53	5	26	2	4	4	2	11	11	1	44	12	5		14		71
Total	227	468	70	87	28	74	954	460	346	112	274	356	63	14	16	199	186	44	381	90	77	21	179	12	1357

Table I. shows the whole number of Deaths in the city of Boston, for a series of nineteen years, from January 1, 1813, to January 1, 1832, together with the amount for each year; and the number which has occurred from the most prevailing diseases.

The greatest number of deaths which have taken place any one year, occurred in 1825, being 1450. The least number has been 727, in 1814. During the first half of the series, 9341 deaths are registered. During the latter half, 11,781. Whole number, 21,122.

Consumption stands at the head of our bill of mortality.—The largest number of deaths are recorded in 1824 — 244; the least number 138, in 1818. Although considerable variation is perceived in the number of deaths from this disease, the increase is obvious; not so great, however, as may have been supposed. During the first nine and a half years, 1754 deaths took place — during the latter period, 1955 deaths, making a total of 3709 deaths.

Of *acute affections* of the Chest, comprising Inflammation of the Lungs and Pleurisy, the greatest number of deaths took place in 1831, 101; the smallest number is reported in 1820, 28. The whole number of deaths during the nineteen years, is 1096; making a total of mortality, *from diseases of the lungs*, of 4805.

The whole number of deaths from *Bilious Fever*, is 137; 74 of which occurred during the first half of the series — 63 in the latter period. The largest number of deaths is observed in 1828, 16; the least number 2, in 1815.

By far the most fatal form of fever among us, *Typhus*, has been rapidly declining; so that the disease which, in 1817, '18 and '19, produced so much alarm and proved so fatal, has, for the twelve last years, not only caused many less deaths, but its character, in most instances, has been much more mild. During the first half of the series, 638 deaths are reported; while but 297 have occurred in the latter period. In 1817, 157 deaths took place. In the last portion of time, the highest number is 54, in 1825; the lowest 21, the last year. Whole number of deaths in the series, 935.

The greatest number of deaths from *Inflammatory Fever*, any one year, was 12, in 1823. No death occurred during the years 1819 and '25. 61 deaths only are recorded for the series of 19 years.

Under the head of *Malignant Fever*, I have included such

as are called in the bill of mortality, at the Health Office, putrid, yellow and malignant. The table contains all who died, in the city and at Rainsford Island. The hospital at the Island receives the sick from vessels arriving from abroad, as well as such as are sent from the city. During the years 1816 and '19, 44 deaths occurred, 28 of which were reported at the Island. Six years of the series have been exempt from any death by these diseases; and the cases for the most part, in the city, have occurred in only a small district, favorable to the origin of miasma — being very much exposed to the sun, and excluded from the influence of the wind from the west. The whole number of deaths is 72.

But 9 cases of *Intermittent Fever* have occurred, and 3 cases of *Spotted Fever.*

Although, during eight years of the series under observation, not a single case is recorded of *Scarlet Fever*, its prevalence and mortality, the last and present seasons, have rendered it one of our most formidable and dreaded diseases.— Previous to the last season, it was looked upon as almost peculiar to childhood, and as far from unmanageable. Its general prevalence of late, together with the suddenness of its attack and the violence of its symptoms, excite in the mind of the physician no ill-founded alarm. The greatest number of deaths, previous to the last year, were 12 in 1826 — 84 deaths occurred in 1831. Whole number of deaths, 134.

The number of deaths from Fever, the types of which are not reported, is 87 — making the whole number of deaths from Fever, 1438.

The greatest number of cases of *Inflammation of the Brain*, are recorded in 1829, being 21. No case occurred in the years 1813, '19, '21, and '24. Whole number of cases is 143.

By recurring to the Table it will be perceived, that the acute affections of the *Lungs*, during the last half of the series of years, have been increasing somewhat. Thus, 435 deaths are registered for the first half, while 661 occurred during the latter portion. The largest number of cases occurred the last season, which will be long memorable for the fatality of the Influenza. Whole amount of cases, 1096.

Previous to the year 1820, no mention is made in the record, of *Inflammation of the Stomach, or Bowels.* The greatest number which has occurred in one year since, has been 35 in 1828 — the least, 5 in 1820 and '22.

From *Inflammation of the Liver*, 89 deaths have been produced. The highest number in a year, is 16 in 1825. No death occurred in 1830.

But 2 deaths have been produced by *Inflammation of the Spleen;* and 4 only by *Inflammation of the Bladder and Kidneys.*

Of *Inflammation of the Heart*, 20 cases have occurred — 10 of these took place the last season; the remainder during the years 1824, '25 and '27.

But 15 deaths have been produced by *Erysipelas* — 8 of which occurred in 1826, at the Massachusetts General Hospital, where it existed epidemically.

Twenty-six deaths are registered from *Inflammation*, without the organ affected, or species of inflammation being named. Whole number of cases by inflammation, 1576.

The greatest number of deaths any one year from *Dropsy*, occurred the last year, being 83; the least number, was 14 in 1820. The whole number from dropsy, 843.

I have included, under the head of *Bowel Complaints*, Cholera, Diarrhœa, Dysentery, Dyspepsia, Colic, and diseases of the Mesentery.

Under *Cholera* I have arranged the cases of Cholera Infantum. The largest number of cases of cholera, any one year, is 11 in 1819 and '25; the least, 1 in 1815. The largest number of cholera infantum, 19 in 1828. No cases are registered in 1814, '15, '16, '18, '22 and '29. In these years, the fewest cases of cholera occurred. Highest number any one year, from cholera and cholera infantum combined, 26 in 1828. Whole number from cholera, 112 — from cholera infantum, 115. Total from cholera and cholera infantum, 227.

The cases of *Dysentery* amount to 468 in the Table. The largest number any one year, are reported in 1821, being 62; the least number 4, in 1814 and '18.

During the first six years of the series, no case of *Diarrhœa* is reported — the whole number the remaining years, is 70 — the greatest number any one year, is 24 in 1824. Whole number from dysentery and diarrhœa, 538.

A few years since, *Dyspepsia* was looked upon by our neighbors as a disease peculiar almost to Boston. During the last four years, not a single case is recorded; and since 1821, including that year, only 15 cases are observed. In the eight previous years, 72 cases occurred, 18 of which took place in 1816. Whole number of cases in the series, 87. Many of

those cases, which were formerly classed under this head, are undoubtedly, at the present time, ranked under diseases of those organs, which may be principally affected during the disorder; and the number of these cases is unquestionably lessened by the water, which, in many parts of the city, is strongly impregnated with saline particles, being avoided by individuals predisposed to affections of the alimentary canal.

No case of *Colic* is reported previous to the year 1822 — but 28 cases have occurred. Of these, the highest number is observed in the years 1825, '26 and '31, being 4 each year.

The deaths caused by other affections of the bowels, including Mesenteric diseases, and Herniæ, are 74; making a total under the head of Bowel Complaints, of 954.

Under the head of *Convulsions*, I have included *Fits*, of the bill of mortality at the Health Office. By looking over the bill, the terms *convulsions* and *fits*, are evidently considered, by many practitioners, synonymous. Thus, in the years 1815, '16, '18, '19, no *convulsions* are recorded; while in the years 1827, '28, '29, '30 and '31, no *fits* are named.— During the former period, 72 cases of *fits* are registered; and during the latter, 138 cases of *convulsions:* proving that *fits*, during the last years of the bill, have been included under *convulsions*. The whole number of cases has been 450. The greatest number during the year 1825, 48; the least number, 8 in 1822.

Croup has rapidly increased in its mortality. During the first half of the series, 69 cases occurred; 277 are recorded for the latter period. The largest number, 50, took place during the last year; the least number, the first year of the series, 1. Total, 346.

Quincy, on the contrary, has become much less fatal during the last few years. During the first nine and a half years, 70 cases occurred; in the latter period, only 42, — which is not a little remarkable, considering the increase of population. The greatest number of cases, any one year, was 16 in 1816; the least, 1 in 1828. The whole number of cases, 112.

The greatest number of deaths from *Hooping Cough*, occurred in 1828, being 40; the least number, 1 in the years 1813 and '18. Total 274.

Although, during the years 1813, '14, '17, '19, '20, '23, '27 and '28, not a fatal case of *Measles* occurred, still, in some years, they have proved very fatal — 149 deaths being the largest number, took place in 1821: 1825 and '29 were also seriously afflicted.

But 14 cases of *Small Pox* have proved fatal during the last 19 years. In this period, 14 years have been entirely exempt — and the highest number of deaths during the remaining five years, has been 4 in 1815 and '21.

The greatest number of cases of *Asthma*, has been 2 in 1822, '24, '25, '27 and '31. Total 15.

The whole number of deaths from *Apoplexy*, is 199 — the cases vary from 18, the highest number any one year, to 3, the lowest.

The deaths from *Palsy*, amount to 186, 22 being the highest number in a year. No fatal case occurred in the year 1819.

The largest number of deaths from *Insanity*, took place in 1825, being 10. During three years of the series, no death took place. Whole number, 44.

The bill for the first three years of our series, is unpolluted by a death from *Drunkenness*. Since then, this curse upon our country has been making rapid strides; and in spite of every effort of the friends of temperance, stands fearfully high in the records of our mortality. *Five diseases* only have caused more deaths, during the series under our observation, than *Intemperance*. Consumption, typhus fever, lung fever, dysentery and convulsions, — these, alone, precede this pestilence. "*Convulsions*" ought not, perhaps, to be placed before it — because great looseness of arrangement is evident under that head: cases of apoplexy and epilepsy may both have been included under the term "*fits;*" so that it stands the *sixth* malady in point of fatality; and, at the same time, a *voluntary disease!* The compiler of this paper had really believed, that a great diminution of deaths, from intemperance, had taken place during the last few years in this city: that the strenuous efforts which had been made, by precept and example, — that the loud voice of public opinion, had already begun to produce a visible change, even in the *bill of mortality*. Most of the individuals who have died, may have had the disease indelibly fixed upon their systems, previous to the late revival on this point of morality. Heaven grant it may have been so — that the day *may* come, when one immense cause of mortality shall have been removed — when the frame shall no longer be withered by an unquenchable fire — when this national curse shall be blotted out forever.

The greatest number of deaths from *Intemperance*, occurred during 1831, being 44. In the first half of the series, 93 cases are recorded; in the latter half, 288 — making a total of 381.

No physician, however, in making his observations upon this table of mortality, has a fair criterion of the real state of the pestilence in question. In the various forms of fevers — the inflammations and diseases of the various organs — in convulsions, apoplexy, palsy, insanity, suicide, epilepsy, — in the great scourge of our country, pulmonary consumption — in premature decay, and sinking age, he sees the effects of the destroyer; and feels conscious that consumption, alone, claims more victims to its power.

During the first year of the series, not a case of *Suicide* occurred. The largest number, 12, is reported the last year — distinguished by a general depression of business. The whole number of cases is 90.

The whole number of deaths from *Cancer*, is 77; the highest number of cases, 11. It will be observed, by looking over the bill, that the disease cannot be said to be increasing, 44 cases, only, having occurred during the latter half of the series.

But 21 cases have occurred of *Gravel* and *Stone in the Bladder*, seven years exhibiting no case — the greatest number 4; 13 of the cases have taken place the latter half of the series.

Under *Parturition* and *Childbed*, I have included *Puerperal Fever*, in preference to ranking it among the febrile affections. The greatest number any one year, is 17 in 1825 and '29 — the least, in 1819, 2. A gradual increase is seen by the table. The whole number of cases is 179.

But 12 cases of *Epilepsy* are registered; the highest number is 3.

The cases of *Still-born* are 1364. The greatest number, any one year, 116; the least in 1815, 21. 823 cases have occurred during the latter half of the series.

I have no means of ascertaining the ages, at which deaths from particular diseases have occurred; nor of referring even to the *births*, no bills having been kept — and am, therefore, unable to furnish an extremely important register, the proportion of the births of each sex, and the proportion of the births to the deaths. My bills are thus necessarily imperfect. I am *unwilling*, however, to withhold my mite, because *unable* to do more.

TABLE II.

Summary of the deaths in Boston for each month in a series of seven years, including the still born, according to the Annual Reports.

YEARS.	JANUARY.			FEBRUARY.			MARCH.			APRIL.			MAY.			JUNE.		
	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,
1813	39	18	57	53	17	70	50	27	77	43	26	69	49	19	68	36	24	60
1814	30	32	62	20	33	53	33	32	65	35	21	56	25	19	44	23	18	41
1815	28	23	51	31	26	57	32	30	62	30	30	60	28	22	50	27	25	52
1816	45	46	91	49	49	98	35	48	83	48	39	87	49	23	72	40	13	53
1817	39	33	72	30	37	67	52	19	71	37	30	67	41	21	62	36	24	60
1818	54	17	71	34	26	60	42	49	91	48	31	79	47	31	78	51	32	83
1819	36	21	57	28	24	52	32	23	55	27	23	50	30	26	56	22	17	39
Total,	271	190	461	245	212	457	276	228	504	268	200	468	269	161	430	235	153	388

TABLE II.— CONTINUED.

YEARS	JULY.			AUGUST.			SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.		
	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,
1813	31	28	59	27	19	46	26	51	77	33	44	77	39	23	52	40	34	74
1814	35	28	63	34	45	79	20	31	51	48	52	100	43	23	66	29	19	48
1815	28	31	59	38	45	83	45	58	103	68	46	114	53	23	76	58	26	84
1816	34	27	61	36	28	64	48	26	74	40	30	70	31	29	60	58	33	91
1817	34	30	64	77	74	151	39	59	98	37	62	99	26	34	50	30	17	47
1818	45	30	75	42	35	77	44	44	88	65	39	104	54	35	89	39	37	76
1819	27	26	53	57	37	94	53	60	113	38	45	83	35	31	66	35	31	66
Total.	234	200	434	311	283	594	275	329	604	329	318	647	281	198	479	289	197	486

Previous to the year 1820, I have no means of ascertaining during which months the still born occurred, and have accordingly included them here. In the year 1813, there were 36 still births; in 1814, 32; in 1815, 21; in 1816, 31; in 1817, 33; in 1818, 46; in 1819, 89. Total, 228.

TABLE III.

Summary of deaths in Boston for each month in a series of 12 years, with the number of adults and children, excluding the still born ; according to the Annual Reports.

YEARS.	JANUARY.			FEBRUARY.			MARCH.			APRIL.			MAY.			JUNE.		
	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,
1820	46	31	77	32	22	54	49	29	78	35	22	57	39	20	59	37	21	58
1821	61	39	100	40	24	64	62	27	89	53	26	79	50	38	88	25	66	91
1822	40	22	62	39	23	62	50	30	80	52	25	77	48	14	62	45	18	63
1823	51	28	79	49	13	62	49	22	71	41	34	75	52	29	81	35	14	49
1824	47	29	76	44	22	66	49	39	88	54	26	80	43	23	66	34	24	58
1825	49	30	79	73	27	100	42	30	72	48	46	94	45	60	105	31	51	82
1826	45	44	89	45	30	75	56	37	93	49	42	91	56	50	106	45	43	88
1827	49	21	70	38	21	59	43	42	85	43	31	74	51	25	76	39	22	61
1828	52	51	103	35	34	69	48	31	79	46	52	98	52	44	96	49	35	84
1829	54	45	99	54	42	96	56	37	93	57	36	93	57	33	90	41	31	72
1830	59	53	112	52	41	93	46	38	84	56	35	91	45	30	75	25	28	53
1831	49	40	89	46	33	79	66	35	101	51	39	90	45	27	72	37	49	86
Total	602	433	1035	547	332	879	616	397	1013	585	414	999	583	393	976	443	402	845

TABLE III.—CONTINUED.

YEARS.	JULY.			AUGUST.			SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.		
	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,	Adults,	Children,	Total,
1820	40	23	63	43	50	93	38	50	88	53	50	103	44	37	81	48	41	89
1821	39	73	112	50	77	127	49	84	133	44	60	104	57	39	96	55	38	93
1822	44	19	63	46	43	89	39	69	108	44	50	94	45	49	94	52	43	95
1823	37	18	55	36	36	72	42	68	110	60	60	120	49	35	84	42	23	65
1824	49	26	75	53	51	104	55	78	133	50	59	109	46	60	106	56	57	113
1825	71	76	147	40	93	133	52	68	120	53	54	107	61	33	94	63	40	103
1826	57	37	94	56	69	125	49	66	115	68	38	106	51	32	83	39	29	68
1827	51	30	81	45	55	100	45	46	91	43	26	69	50	28	78	46	27	73
1828	55	28	83	65	55	120	70	72	142	58	45	103	50	35	85	53	32	85
1829	54	39	93	47	47	94	33	87	120	40	65	105	42	56	98	45	45	90
1830	45	35	80	37	45	82	44	51	95	58	52	110	33	32	65	48	34	82
1831	55	41	96	50	72	122	58	65	123	69	63	132	58	74	132	115	109	224
Total	597	445	1042	568	693	1261	574	804	1378	640	622	1262	586	510	1096	662	518	1180

Table III. exhibits a summary of the Deaths in Boston, for each month in a series of twelve years, viz: from January 1, 1820, to January 1, 1832, with the number of Adults and Children, excluding the still-born.

Commencing with the year 1820, the still-born of each month form a separate column in the bills of mortality, which enables me to form a more accurate table. From the above mentioned period, all those who have died without their ages having been accurately known, are also included in a column by themselves. During the series of twelve years, there have been 827 deaths of this description — they, of course, are excluded.

In the 3 months of spring, we find regist'd	1784	adults,	1204	children.
In the summer months, - - - - -	1608	"	1540	"
In the autumnal months, - - - - -	1800	"	1936	"
In the winter months, - - - - -	1811	"	1283	"

The following months are arranged according to their mortality, including both adults and children, beginning with the most fatal: 1st, September; 2d, October; 3d, August; 4th, December; 5th, November; 6th, July; 7th, January; 8th, March; 9th, April; 10th, May; 11th, February; 12th, June.

The months in which the greatest number of *adults*, only, have died, are arranged as follows: 1st, December; 2d, October; 3d, March; 4th, January; 5th, July; 6th, November; 7th, April; 8th, May; 9th, September; 10th, August; 11th, February; 12th, June.

The months arranged according to the mortality of children, stand in the following order: 1st, September; 2d, August; 3d, October; 4th, December; 5th, November; 6th, July; 7th, January; 8th, April; 9th, June; 10th, March; 11th, May; 12th, February.

Commencing with the year 1820, the months are stated in which the *still-born* occurred. The largest number since that period, in any one month, is twentytwo in the month of August, 1830: the least number, one, in the months of August and October, 1829. The whole number of still-born which have been registered since January 1, 1820, is 1069; giving an average for each year since that time, of 89. The whole number which have occurred during the whole series of nineteen years, is 1357; making the average 71 for each year. Of this total, 532 cases are recorded, from the 1st of January, 1813, to the 1st of July, 1822, being the first half of the series; and the remaining 825, from the 1st of July, 1822, to the 1st of January, 1832, the latter half.

The following Tables are a summary of the Deaths in Boston, for *each month*, in a series of nineteen years. Each month forms a table by itself. Two sets of tables are here presented — one table for a series of seven, the other for a series of twelve years. They were prepared at different times, and from different sources; else they would have been continued as one and the same table.

The tables kept since January, 1820, to which I have had access, are more to be depended upon, than those which are to be found previous to that period. The labor and attention which have been bestowed upon this entire series, have rendered it, however, tolerably perfect, I trust, and to be confided in by my brethren.

The still-born are here included; the whole number of these, being given below, may readily be deducted from the total under one year.

The whole number of those who have died under one year, is 3491; between 1 and 2, 2039; between 2 and 5, 1370; between 5 and 10, 733; between 10 and 20, 941. Total number of children, 8574.

The whole number of *adults*, whose ages are known, is 10,294, viz: between 20 and 30, 2460; between 30 and 40, 2373; between 40 and 50, 1914; between 50 and 60, 1287; between 60 and 70, 974; between 70 and 80, 806; between 80 and 90, 410; between 90 and 100, 69; between 100 and 110, 1.

TABLE IV.

Summary of deaths in Boston, during the month of January, in a series of 7 years — viz. from the 1st of January, 1813, to the 1st of January, 1820; including the still born.

YEARS.	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	8	3	0	0	0	4	0	1	1	1	1	5	1	4	4	3	6	4	2	3	1	1	1	2	0	0	57
1814	13	3	4	1	3	1	2	4	0	1	3	5	2	5	2	2	1	1	0	1	1	3	1	3	0	0	62
1815	4	6	0	3	1	5	0	2	0	2	2	5	2	3	3	4	2	1	0	1	1	2	0	1	0	1	51
1816	10	9	5	3	2	5	4	0	4	4	5	5	4	6	3	7	2	3	2	3	2	2	1	0	0	0	91
1817	3	7	4	5	5	2	3	0	0	4	8	1	1	8	5	6	1	4	1	2	1	0	0	1	0	0	72
1819	4	4	2	2	2	2	1	0	0	0	3	3	5	4	5	6	9	4	2	1	3	4	1	3	0	1	71
1820	8	4	1	1	0	1	0	1	2	3	4	4	5	4	4	1	2	3	3	2	0	3	0	1	0	0	57
	50	36	16	15	13	20	10	8	7	15	26	28	20	35	26	29	23	20	10	13	9	15	4	11	0	2	
Totals,	86		31		33		18		22		54		55		55		43		23		24		15		2		461

TABLE V.

Summary of the deaths in Boston, during the month of January, in a series of 12 years, viz. from the 1st of January, 1820, to the 1st of January, 1832.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	10	5	4	4	3	1	0	1	1	2	4	6	2	3	6	3	8	0	0	1	4	3	2	2	0	2	77
1821	7	10	4	2	4	4	1	1	5	1	4	7	5	5	9	3	7	5	2	5	2	5	1	0	0	1	100
1822	3	4	0	1	4	3	0	1	3	3	2	6	5	6	3	4	4	3	3	1	1	0	0	1	0	1	62
1823	7	6	2	2	2	1	1	2	0	5	9	6	3	5	5	4	4	4	2	0	3	0	3	2	1	0	79
1824	6	7	1	4	2	2	1	2	2	2	2	8	7	3	5	3	6	2	1	5	1	2	1	1	0	0	76
1825	6	2	6	2	3	1	3	1	2	4	1	2	5	8	6	3	3	2	1	3	2	8	2	2	0	1	79
1826	11	6	3	5	6	4	2	4	2	1	7	3	4	3	4	4	5	4	1	2	1	1	1	4	0	1	89
1827	9	3	2	1	1	2	0	0	1	2	4	16	5	3	5	2	3	5	1	0	1	0	1	3	0	0	70
1828	12	15	4	3	4	3	1	4	1	4	6	7	3	8	4	3	4	4	1	4	0	3	3	0	0	2	103
1829	10	7	3	9	3	6	4	0	3	0	5	6	9	6	6	4	3	2	1	5	1	2	1	3	0	1	100
1830	15	5	2	12	2	7	3	2	1	4	3	10	8	11	7	4	5	1	2	3	3	0	2	0	0	0	112
1831	8	4	4	4	5	5	2	3	1	4	5	8	10	2	3	10	4	0	2	0	1	2	1	1	0	0	89
	104	74	35	49	39	39	18	21	22	32	52	85	66	63	63	47	56	32	17	29	20	26	18	19	1	9	
Total	178		84		78		39		54		137		129		110		88		46		46		37		10		1036

TABLE VI.

Summary of the deaths in Boston, during the month of February, in a series of seven years; including the still born.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	6	1	4	0	1	1	1	1	0	2	2	4	5	4	9	5	3	4	3	3	4	4	0	3	0	0	70
1814	8	7	6	1	3	1	3	0	2	2	5	2	1	0	0	4	3	1	1	1	0	2	0	0	0	0	53
1815	6	7	2	3	1	0	1	2	2	2	3	1	6	2	4	2	1	3	2	1	2	1	0	3	0	0	57
1816	15	14	3	6	3	2	1	1	2	2	4	5	8	6	7	1	1	2	2	2	5	5	0	1	0	0	98
1817	10	3	6	2	4	4	2	0	2	4	4	1	3	4	2	4	4	2	2	0	3	0	1	0	0	0	67
1818	6	8	3	4	3	1	1	0	0	0	3	3	3	3	6	4	1	2	3	2	1	2	0	0	0	1	60
1819	8	6	1	3	0	2	1	2	0	2	2	4	2	3	3	0	2	3	3	1	0	2	0	3	0	0	53
	59	46	25	19	15	11	10	6	8	14	23	20	28	22	31	20	15	17	16	10	15	16	1	10		1	
Total,	105		44		26		16		22		43		50		51		32		26		31		11		1		458

TABLE VII.

Summary of the deaths in Boston, during the month of February in a series of twelve years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M.	F.	
1820	8	3	3	1	3	1	0	0	2	1	3	4	1	4	4	3	3	1	1	0	0	4	0	3	0	1	54
1821	8	0	3	2	0	1	2	1	3	4	2	3	2	6	6	2	3	3	3	4	0	2	0	2	0	0	62
1822	6	6	1	2	1	2	1	1	2	1	7	6	8	3	3	4	1	0	0	1	2	2	0	2	0	0	62
1823	4	3	0	1	1	0	1	1	1	1	1	11	8	6	7	2	1	5	0	4	2	1	0	1	0	0	62
1824	3	3	1	4	2	3	1	0	3	2	7	8	3	4	8	3	5	3	0	1	0	1	0	1	0	0	66
1825	4	4	3	3	4	3	1	1	2	2	2	12	8	3	6	4	3	9	5	3	3	6	3	4	0	3	101
1826	7	8	2	4	2	1	0	1	1	4	6	2	5	3	4	3	1	5	4	5	1	5	0	1	0	0	75
1827	6	2	0	1	2	3	0	1	5	1	4	4	2	4	8	4	1	0	1	6	2	1	0	1	0	0	59
1828	11	10	3	2	0	2	2	2	0	2	3	5	10	3	2	3	2	1	0	3	2	0	0	1	0	0	69
1829	10	8	5	3	7	5	0	2	1	1	7	3	5	4	9	2	2	2	2	4	4	6	2	2	0	0	96
1830	9	9	2	6	7	1	3	0	3	1	4	9	6	5	5	3	3	1	2	1	4	6	1	2	0	0	93
1831	8	9	2	2	5	4	0	1	0	2	4	5	5	8	5	2	4	3	2	1	1	0	2	2	0	2	79
	84	65	25	31	34	26	11	11	23	22	50	72	63	53	67	35	29	33	20	33	21	34	8	22	0	6	
Total,	149		56		60		22		45		122		116		102		62		53		55		30		6		878

TABLE VIII.

Summary of the deaths in Boston, during the month of March, in a series of 7 years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 te 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	8	3	3	2	1	3	1	1	3	2	10	3	6	5	5	6	3	2	1	4	0	3	0	0	0	2	77
1814	10	6	4	2	2	0	3	1	2	2	4	3	4	2	4	3	3	1	1	1	2	2	1	2	0	0	65
1815	7	4	3	4	2	5	1	0	1	3	2	8	2	4	4	5	1	1	1	2	0	1	0	1	0	0	62
1816	16	10	4	4	6	2	2	0	1	3	6	7	3	4	3	3	2	3	2	0	0	1	0	1	0	0	83
1817	4	3	2	1	4	2	2	0	0	1	5	7	6	6	4	7	3	3	3	2	2	2	1	1	0	0	71
1818	15	14	5	6	2	2	0	0	3	2	4	4	4	3	6	6	5	4	2	2	1	0	1	0	0	0	91
1819	5	8	2	2	2	0	2	1	0	1	6	4	5	0	4	3	2	2	1	3	1	1	0	0	0	0	55
	65	48	23	21	19	14	11	3	10	14	37	36	30	24	30	33	19	16	11	14	6	10	3	5	0	2	
Total,	113		44		33		14		24		73		54		63		35		25		16		8		2		504

TABLE IX.

Summary of the Deaths in March, for a series of twelve years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	8	8	3	1	3	0	1	1	0	4	8	5	5	7	8	2	2	4	2	3	1	0	1	1	0	0	78
1821	6	3	3	0	3	3	1	0	3	5	7	9	3	7	8	5	4	1	6	1	3	4	0	4	0	0	89
1822	9	4	4	2	3	0	0	2	4	2	4	7	4	6	4	5	2	6	2	4	1	3	1	0	0	1	80
1823	4	3	3	6	3	1	0	0	2	0	5	4	7	9	7	2	2	1	2	4	2	4	0	0	0	0	71
1824	9	8	4	3	4	4	1	3	1	2	2	4	12	3	5	5	5	1	1	4	2	2	0	2	1	0	88
1825	7	5	6	4	2	2	1	0	1	2	4	6	6	5	5	3	3	1	4	2	0	2	0	1	0	0	72
1826	12	7	3	2	2	4	2	2	0	3	5	7	12	5	5	4	1	4	4	3	1	2	0	3	0	0	93
1827	12	6	2	3	5	5	4	1	3	1	3	6	7	5	4	3	0	5	3	1	2	2	1	1	0	0	85
1828	13	2	2	4	3	3	1	0	1	2	5	9	5	5	4	3	3	5	1	3	0	1	1	2	1	0	79
1829	12	4	4	3	4	5	2	0	3	0	7	8	7	8	7	4	7	2	2	2	0	1	0	1	0	0	93
1830	9	5	3	4	4	5	1	2	2	3	4	8	6	4	3	7	5	0	2	0	4	2	1	0	0	0	84
1831	8	8	1	2	3	5	1	3	0	4	6	6	11	9	6	12	2	4	0	1	2	2	1	2	1	1	101
	109	63	38	34	39	37	15	14	20	28	60	79	85	73	66	55	36	34	29	28	18	25	6	17	3	2	
Total,	172		72		76		29		48		139		158		121		70		57		43		23		5		1013

To be Continued.

Art. II.—Physic and Poetry.

M. Alibert some years ago published a work, the ostensible purpose of which was to point out the relations of medicine to the physical and metaphysical sciences. In the prosecution of this subject, he goes through almost the whole vast catalogue of things which have engaged the attention and study of men; and when we found him enumerating, as standing in intimate relationship to medicine, Chrystallography, Political Economy, and the study,—not *anatomical*, but *moral*—of the human heart; we thought that fanciful notions had gone about as far as a fanciful Frenchman, even, could carry them. We thought that everything, in the heavens and the earth, and the waters under the earth, which had aught to do with physic, had been summoned from its appropriate sphere and abiding place, and one and all brought within the ample circle of our own august and pre-eminent science. There were general physics—the laws and operations of the vast, material universe, embracing thunder, lightning, earthquakes and volcanoes—flood and fire and tempests, and the aspects and influences of the stars. Then came Meteorology, with its thermometrical, barometrical, hygrometrical, eudiometrical and electrical phenomena;—Geology, with its strata, formations, and magnificent systems;—Topography, with its climates, its lakes, its rivers, its mountains and valleys;—the Triad, Electricity, Galvanism and Magnetism, with their own mysterious affinities; hydronamics; gazometry; optics and acoustics; chemistry and mechanics; geometry, with its demonstrations and infallibility; Natural History, with its sub-divisions, mineralogy, botany and zoology; the comparative anatomy and physiology of vegetables and animals; and, finally, intellectual science and moral philosophy, these last including political economy and legislation! We supposed that the list of sciences, kindred and accessary to our own, was exhausted—a supposition, as we are about to show, the simple result of our own narrow conceptions and limited knowledge. What else could remain, after the foregoing enumeration, which should be especially connected with medicine? Nothing less than Poetry, the only art, beside our own, which has ever laid claim to the title, *divine*. How M. Alibert—himself poetical—should have overlooked this relationship, is to us inexplicable, except on the ground that it is not given to any one man to reveal *all* the mysteries of truth.

We have before us a book, which opens with the following annunciation: "Medicine, which holds so distinguished a rank among the subjects of human knowledge, which derives aid from all the sciences, and renders services to all, has not remained a stranger to the imaginative arts; but it is *especially* with *poetry* that it has sustained, in all ages, the most remarkable union." The work, itself, is in the form of a neat little *brochure* of eighty pages, written by Dr Etienne Sainte-Marie, and entitled "A Dissertation upon *Mèdecins-poetés*"—literally, physician-poets. The author does not seem to have had any very definite aim, while writing his dissertation, which is made up of a somewhat incoherent *melange*, consisting of critical and historical notices, exceedingly imperfect and superficial—of various medical poems, and their authors—quotations from the poems, &c; the whole interspersed with sundry sage observations and arguments, tending to set forth and illustrate both the fitness and reasonableness of the aforesaid very remarkable alliance, which has, from time immemorial, existed between physic and poetry. It is not our intention to give an analysis of the book; but, as the subject forms a curious chapter in the history of medical literature, we propose to take such brief and imperfect notice of it, as the few and meagre materials in our possession will permit.

All bibliopoles know, that, for a long time after the revival of learning and the invention of printing, writers of every description, scientific as well as literary, crowded the prefaces, introductions, dedications, and the text, even, of their books, with latin poetry. This is as true of medical authors, as of any others. We have in our possession a volume, entitled *Medicina Spirituum*, printed at Hamburg, in 1673, which contains, after a dedication to the king, and an address to the reader, a latin poem of four pages, inscribed to a friend of the author. It was long before this period, however, that one of the most celebrated medical poems was written. The occasion was said to have been this. Robert, Duke of Normandy, son of William the Conqueror, and one of the earliest crusaders, had been wounded in the arm by a poisoned arrow.—The wound had become fistulous, and he visited the celebrated school of Salernum, near Naples, for relief. The physicians decided, that the poison could be extracted only by suction, and Robert refused to avail himself of a means of cure which was to be obtained at the peril of another's life. His wife Sybilla, while Robert was asleep, extracted the poison, and

purchased her husband's life by the sacrifice of her own. The poem to which we allude, was written in commemoration of Robert's visit, and inscribed to him, in the name of the whole college. It is entitled, "*Regimen Sanitatis Salerni.*" It contains rules for the preservation of health, treats of the six Non-Naturals, and has a chapter on the cure of fistulous ulcers. The work was extremely popular, and had many imitators.— It was written in Leonine verse, and is generally attributed to John of Milan. Dr Hamilton says, in a note to his late History of Medicine, that a new edition of this celebrated poem is advertised for publication in London, with an introduction and notes, by Sir Alexander Croke. This poem was written early in the twelfth century.

Passing over a host of imitations of the *Regimen*, we come next to the famous poem on Syphilis, by Hieronymus Fracastorius. This poem was first published at Verona, in 1530, under the title of "*Syphilidis, sive de Morbo Gallico*"—a work, says Hamilton, of too much intrinsic merit, whether we regard the chaste and classical elegance of its language, worthy of the best days of imperial Rome—the mellifluence of its versification, hardly surpassed even by the bard of Mantua himself—the vividness and correctness of its imagery, or the importance of its precepts, to be passed without notice in a history of the progress of medical improvement. It was admired, from the first moment of its appearance, by the learned and distinguished Cardinal Bembo; by Sannizarius, the classic author of the "*Prædium rusticum*," and, indeed, by all who could be esteemed competent judges—by whom it was compared with the Georgics of Virgil. The poem contains a full and accurate description of the principal symptoms of the disease, with directions for its treatment. It has gone through a great number of editions, and been translated into Italian and French. An edition was published in London, in 1747.— Fracastorius was born at Verona, in 1483. Portal says of him, that he had a most extensive knowledge of languages, excelled in belles-lettres and the sciences, was a good poet, an excellent philosopher, a learned physician, and a profound and judicious astronomer. Scaliger, himself both poet and physician, had so high a veneration for the poetical talent of Fracastorius, that he wrote a poem in his praise, entitled "*Æræ Fracastoreæ.*"

We proceed to enumerate some of the lesser stars of the medico-poetical constellation, whose feeble light is seen glim-

mering amid the darkness and turmoil accompanying the revival of letters. In 1553, John Carnarius published a poem on the use of hot baths. Peter Petit, a learned physician of Paris, was the author of a latin poem upon tea. This man was a member of the Latin Pleiad, the name of a club, consisting of the seven best latin scholars of the city. Hebenstreit, a celebrated professor of medicine in the University of Leipsic, and the author of a great number of works on anatomy, was also the writer of several poems. Among them, was one entitled "*Metrical Pathology*, or a *Poem on Diseases*," published in 1740; and another, called "*A poem on Man in Health and Disease*," published in 1753. Flemyng, an English physician, published in 1741 a latin poem, in three books, on hypochondriasis and hysteria. This work has been translated into Italian verse, by Dr Moretti, and into French prose, by M. Alibert. We may also mention, "*A poem on Peruvian Bark*," by Closs, in 1765; on "*Hygiene, or the Art of Preserving Health*," by Geoffroy, in 1771; three poems by Reinhard, the several subjects of which are — *leucorrhœa*, *paleness of the face*, and *the fatal termination of wounds of the liver*; and lastly, "*A Poem on Lunar Caustic*," by Demetrius Karakasse. All the above named poems are written in latin, though we have taken the liberty of anglicising their titles.

Among the French medical poets of the seventeenth century, the first that we find worth noticing, are Delaunay and Fontenette, both of whom chose for the subject of their versification, "*The Aphorisms of Hippocrates.*" Scipion Abeille, a native of Riez, in Provence, and surgeon in ordinary to the Duke of Orleans, published, in 1685, "*A Description of the Bones.*" The purely descriptive and anatomical details were written in prose, while the functions and uses of the bones, were given in poetry. It is a rash deed, we know, but the paroxysm of inspiration is upon us, and we risk the guilt of so torturing and emasculating our beloved vernacular, as to make it the medium to our English readers, of Monsieur Abeille's versified description of the uses of the coronal, or frontal bone:

> The very head and *front* of our offending
> Hath this extent, no more;—

so, throwing ourselves upon the indulgence of our brethren, and reminding them once more of the near consanguinity of poetry and physic, we venture upon the translation.

Most curious is this bone;—
The kingly crown it wears,
It serves the eyes for home and throne;
Let gods and men respect and own
The sacred name it bears!
Each passion of the heart here glows
In clearest light upon its page;—
Fear, envy, hatred, sloth and rage;
And all that vengeance can design,
All that is devilish or divine,
This index of the spirit shows.

A short time previous to the appearance of the above work, Charles Spon, a native of Lyons, wrote a metrical treatise on the muscles, bearing this title:

Myologia, heroico carmine expressa.
Musculorum microcosmi origo et insertio.

During the succeeding century, many similar books were written, by men but little known, even in their own times, and altogether forgotten now. We forbear to disturb the silence of their oblivious repose. We have, however, before us, a work of more recent date, and of so high pretensions as to claim something more than a mere passing notice. This is "*The Luciniade*," of Dr Lacombe — being a treatise on midwifery, in the form of a regular built poem of ten books, and three hundred and twenty pages, published at Nismes, in 1815, and dedicated "*Aux mânes de l'immortel Bichat.*" In the early part of the first book, we are favored with the following account of what in medical phrase may be called, the occasional or exciting cause of the poem. Dr Lacombe, while studying the obstetric art in London, was one day wandering along the banks of the Thames, when he discovered, in a secluded bower near a temple, a very beautiful young lady, with a half naked bosom, a most ravishing complexion, a graceful figure, a majestic presence, &c, &c, waving with her right hand a torch, representing the serpent Python, and having a pair of scissors suspended from her waist by a chain of gold.— When we say that the lady proved to be no other than the chaste Lucina, the propriety of her being furnished with the last named article, will at once occur to our readers. A long colloquy follows, between the goddess and the poet, which results in the introduction of the latter into the temple of the former. After examining the vestibule, which was decorated with the portraits of illustrious *accouchers*, the sanctuary was thrown open, exhibiting a room splendidly illuminated, the ban-

quet already spread, and ten nymphs in attendance. The conceit of this feast is a new one, and forever establishes the claim of our poet to originality of conception. It was a sort of allegorical supper, and, we presume, very delicious, withal, though the goddess and her protegé, if they had been in any degree subject to the vulgar influences of associations of ideas, must have experienced some antiperistaltic sensations in the epigastrium. However, there is nothing like the "lights of science" for eradicating such common-place notions, and we suppose that the happy pair ate heartily of the dishes, each of which, says the poet, offered to his enchanted eyes the representation of some object of his art! A pear-shaped fruit stood in the centre, an emblem of the uterus and its appendages.—A circular cake, with thin edges, showed forth the placenta and umbilical cord. Twenty different sweet-meats, (*bonbons*) skilfully moulded, were the models of the same number of fœtuses. Pies and biscuits, beautifully designed, imitated the forms and proportion of female pelves, at different ages; and wines, variously colored, called to mind the milk, blood, and *bile!* The poet, in transport, throws himself at the feet of the "chaste Lucina," and —— the ten nymphs are forthwith ordered to quit the room. She then points out to him a bronze monument, ornamented with antique marbles, and supported by a pedestal of jasper and porphyry, which she has destined as the reward of the first native of France, who, "by his luminous and immortal writings," shall re-establish her worship and avenge her injured honor. Dr L. is, of course, "rapt, inspired;" he becomes the favored candidate for the prize, and the book before us, written with a pen of brass, dipped in an indelible ink, made by mixing nectar with a small quantity of bile, is the result of his labors.

In the course of the remaining part of the first book, we have an account of the mechanism of conception and of parturition, a system of generation — an attack on the opinion, generally received till about the time of Baudelocque, that the fœtus, at the seventh month, turns a somerset in the uterus, and a description of the pelvis and its diameters. The book is interrupted only by the poet's falling asleep.

Dr L. is a violent and uncompromising anti-Cesarian. He has most implicit faith in the infallibility and omnipotence of Nature, and the burden of his song is, war to all intermeddling and operating assistants. We suspect that his pen, when wielded against the uterotomists, symphyseotomists, and other oto-

mists, was dipped in an ink, the proportion of whose ingredients differed from that given him by Lucina, the *small quantity* consisting of *nectar* instead of *bile*.

At the end of the first chapter, we left our poet asleep; at the beginning of the second, he is carried by his immortal mistress — the lady with the scissors — to the Elysian Fields, where he meets Jane Seymour, Vasseur, a patient of Dubois and Baudelocque, and the beatified shades of many other women, victims of the Cesarian knife. He encounters, also, in this abode of the blessed, Ambrose, Parè, Guillemeau, Brunet, Heister, Puros, Smellie, and other celebrated anti-Cesarians. While answering some questions of Henry IV. in regard to the condition of France, he is interrupted by a most cacophonous gabble, proceeding from a group of females, who prove to be the wives of several distinguished accouchers of Paris, disputing with each other the relative rank, fortune and celebrity of their respective husbands. Among others, whose speeches are given on this occasion, are Mesdames Pelletan, Labatier, Dubois, Baudelocque, and Alphonze Le Roi.

In the third book, the poet is transported to the gloomy realms of Pluto, where, in a cave especially appropriated to the Cesarians, he meets Henry VIII. of England, Rousset, Halle, Portal, Mauriceaw, Lauvejat, and others of inferior note. We must not forget to mention, that, among these operating obstetricians, not the least prominent station is assigned to the famous bull, who, according to Desault, performed with great skill and entire success the Cesarian section upon a woman, who was thrown, by the falling of the amphitheatre, into the arena of a bull-fight, at St Sebastian.

We cannot better or more briefly give our readers an idea of the remaining parts of this poem, than by transcribing from the "*Arguments*," some of the principal topics treated in each book. In the fourth, "The poet attempts to destroy the fatal prejudices, consecrated by Routine, the influence of which retards the progress and improvement of midwifery. Among these, is the belief in the utility of repeated bleedings, during pregnancy; the proscription of emetics and purgatives; the pretended danger of *lavemens*, &c, &c. Pregnant women should be temperate; the practice of obstetrics requires less force than address; inertia of the uterus is more frequently the cause of difficult and protracted labor, than any vices of the pelvis; danger of the tampon in ulterine hemorrhage; principles of natural and of laborious delivery," &c.

In the fifth book, "The poet, in order to relieve and enliven the dulness of his work, amuses his pupils with various anecdotes relative to his art. Frankness of the Indian women, who, during gestation, acknowledge to their husbands the infidelities of which they have been guilty; observation of Le Duc, surgeon-accoucher of Paris, which proves that women are possessed of the devil; amusing instances of precocious and protracted births; system of Millot, for procreating the sexes at will; influence of the maternal imagination on the organization of the fœtus, &c.

In the next, the author receives, at the temple of Lucina, crowds of young females, pupils of the goddess; and he points out to them the moral and physical qualities essential to the worthy performance of their duties. He also proves — history in hand — that females were the sole practitioners of his art among the Hebrews, Jews, Egyptians, Greeks, Romans, Arabs, Persians, Mussulmen, and the French, down to the age of Louis XIV. The rest of this and the remaining four books, are mostly made up of mythological fables, silly fictions of his own, and vaporing patriotism.

There are still other and greater names than any that have yet been cited, written among the children of Apollo, in his double capacity as god alike of the lancet and the lyre. The most distinguished among these, is Haller, to whom, more emphatically than to any one else in our profession, this side Galen, belongs the appellation *great*. Haller's poems were read and admired throughout all Germany, before he was known as an anatomist and physiologist, and they are said to have contributed not a little to the polishing and improving of his native language. They have been translated into French, and have gone through several editions. The most remarkable among them, is entitled "*The Alps.*" Sauvages, the great Nosologist, furnished for the "Mercury of France," in the years 1728 and 1729, several poetical articles, distinguished by the letters S. de L., the initials of his name — Sauvages de Lacroix.

In the English language, the names and works of Darwin, Armstrong and Good, are too familiar to our readers to require, in this connexion, any detailed notice. The poems of the two first named physicians, have enjoyed, as is well known, a high celebrity. Darwin had the reputation of having founded a new school of poetry, though his "Loves of the Plants" met with not a little good humored ridicule, as well as praise. A sort of

burlesque parody upon this poem, was published by Frere, entitled "The Loves of the Triangles," a poem which we have never seen, but which, judging from its name, ought to have at least *three* good *points*. The reputation of the Loves of the Plants was increased, rather than diminished, by this publication; but the poem itself, like the loves which it commemorates, is so destitute of all moral interest, and commends itself so feebly to our feelings and sympathies, that it is now fallen into general neglect. Armstrong's "Art of Preserving Health, is a successful attempt to incorporate science and poetry. By giving it a moral, as well as a medical interest, he has raised the dignity of the poem. It is distinguished by judicious thoughts, correct expression, and lucid management, rather than by originality of genius, harmony of versification, or ardor of poetic feeling."

The concluding portion of the dissertation by Sainte-Marie, spoken of in the commencement of this article, is devoted to an earnest vindication of the suitableness and utility of the connexion between medicine and poetry. We forbear from the discussion of this matter, limiting our more humble purpose to historical compilation. We suspect, however, that it would not be a very easy task to convince *the public*, that a man given to writing verses, might yet be a good practitioner of physic. There is a popular feeling of some necessary incompatibility of the two vocations, notwithstanding their mythological relationship. Darwin delayed the publication of his poems till his character as a practitioner was too well established to be injured by such a step. We may, therefore, with full consistency, advise our more imaginative brethren, as they value their reputation for wisdom, and as they regard the interests of their purses, to eschew the charms of fancy, and to put far from them the fascinating dalliance of the sacred Nine; while, at the same time, we reject, *in toto*, the too common notion, that any great mental endowment must be held at the expense of one or of all others. That the faculty of ideality — those powers and susceptibilities making up what is commonly called imagination — which enables the mind to create for its own companionship all forms of possible beauty, and to throw over even the rugged world of reality the mellow light and prismatic coloring of its own etherial and creative essence, may exist in harmonious combination with the sternest logic and the most comprehensive generalization — in short, with the soundest and clearest judgment, is sustained by abundant fact, and

in accordance with the best philosophy of mind. As the most precious and imperishable gems will take the brightest polish and the purest lustre, so are the strongest intellects susceptible of the highest and most various embellishment.

The medico-poetical literature of our own country, offers but scanty materials for our notice. One of our greatest poets — our sweetest singer — was educated a physician, and was, for a short time, engaged in the practice of medicine; but he has long since abandoned the profession. Though not coming precisely within our limits, we may mention the "*Terrible Tractoration*" of Mr Fessenden, standing, as it does, in relation to one of the most curious occurrences in medical history. The work of "*Sylvan, Enemy to Human Diseases,*" written by that singular, itinerant disciple of Æsculapius, known as the *Rainwater Doctor*, is interspersed with many scraps of versification.

We close, with the following not very dignified quotation, from Dr Samuel Thompson, the steam doctor. We find it, among other similar efforts, in a small pamphlet, published at Boston, in 1821. It was suggested, says the author, by reading, in Mann's Medical Sketches, some notices of the bad effects of the injudicious use of mercury:

"MERCURY, ARS'NIC, OPIUM too—
PHYSIC, BLISTERS, LANCE, — adieu!
And all who use them we deny,
Excepting when we wish to die.
We know that bleeding causes death;
We bleed a beast to stop his breath;
The same is used to save man's life;
To ease his pain they take the knife.
Much as these moderns take man's blood,
So much his life goes in the flood!
If any life should yet remain,
They then the LANCET use again.
We do disdain their pois'ning trade,
For better purpose we were made,
Thus to be bled like beasts to death,
Or poisoned rats to stop our breath."

ART. III. — ASSASSINATION OF DELPECH.

THE tragical event related below, while it has cost the profession a most distinguished member, has also left it an impressive admonition, on a point which cannot be too strongly addressed to the awakened attention of medical advisers.

M. Delpech was a victim to an atrocious act of professional infidelity; and without attempting to justify the deed in the agent of it, we are free to declare our opinion, that, as a retribution on the offender, it is most just and salutary.

It is essential to the value and the respectability of the medical profession, that the intercourse between the physician and his patient should be strictly confidential, and no penalty can be too severe for a violation of it. The physician's *first*, and, as we maintain, his *paramount* duty, is to his patient. So deeply is the whole community interested in the inviolability of his professional fidelity, that while, on the one hand, neither courtesy, friendship nor bribery should tempt him to communicate any matter which his patient may confide to him as a physician, society is bound, on the other, to protect him from any attempt to extort them, under the forms of legal proceeding.

This point of honor and duty is well understood, and, as we believe, rarely, if ever, violated intentionally by the physicians of our community; but there is an undignified and mischievous kind of tattle, in which some gentlemen indulge, generally for the purpose of magnifying their own business or skill, which is always liable to run into disclosures, which are not intended by them in the outset, nor even perceived at the time. Such *talk* is always an offence against good taste, and indicates a mind not only destitute of materials for valuable conversation, but too regardless of the obligations incurred by confidence reposed. E.

"This deplorable event, which took place at Montpellier on the 29th October, has created the most intense and painful interest relative to the facts. Demptos, the murderer, had been a patient of M. Delpech's, some time before: he was treated for varicocele, and it would seem that the cure was attended with circumstances that rendered it imprudent for him to form a matrimonial engagement. It is further stated, that M. Delpech having been consulted by the family into which Demptos wished to marry, gave them some intimation of his patient's condition: Demptos met M. D. at the theatre, the night before the fatal deed, and it is thought that he demanded from him a retraction of what had been said to the family. However, on the 29th, the assassin stationed himself in the balcony of the house where he lodged, and watched the approach of M. Delpech's cabriolet. It came — when, with one shot from a double-barrelled gun, he killed the servant, and with the other the master. He then retired into the house, and blew out his own brains with a pistol. M. Delpech expired in a few minutes. His obsequies were performed on the

31st, amid the general lamentation of the people of Montpellier. Orations were pronounced over his tomb by MM. Duges, Boyer, and Trinquier.

M. Delpech was in his sixtieth year. He was a chevalier of the legion of honor, professor of clinical surgery to the faculty of Montpellier, surgeon-in-chief to the principal hospital, and a member of numerous learned societies throughout Europe.

On examination of his body, it was found that the ball had entered just above the nipple of the left breast: after fracturing a rib, it passed through the upper part of the lung, tore the cross of the aorta, divided the apex of the right lung, and came out at the shoulder of that side, after a fracture of the humerus. From morbid appearances discovered in the lungs, it is supposed that M. Delpech could not, in the ordinary course of nature, have lived many years.—*Med. Gaz.*

Art. IV. — Has the Parotid Gland ever been extirpated?

By the kindness of a friend, we have been favored with the perusal of a lecture on this question, delivered in Jefferson Medical College, by Mr Pattison, late Professor of Anatomy in the London University. The subject is a very proper one to make part of a course of Surgical Anatomy; but we must take the liberty to protest against the propriety of making the discussion of these disputed matters the occasion of electioneering for a particular institution, or of puffing its professors.

It seems that the Professor of Surgery in the University of Pennsylvania, in one of his exercises before his class, took occasion to deny, not only that the Parotid had been extirpated, but that it could be successfully done. Some of the students of the Jefferson school, profess to have considered this opinion as a direct attack upon their teacher, Dr M'Lellan, who claims to have performed the disputed operation repeatedly. At the instance of these offended young gentlemen, Professor Pattison takes up the defence of his friend and colleague, in the first part of his lecture, — and in the latter part of it, answers the question, which is the avowed subject of the lecture, very conclusively in the affirmative. In view of the evidence which he has collected, we do not understand how any candid surgeon can maintain the opposite position. We have always favored Mr Pattison's side of this controversy, but must confess ourselves greatly obliged to that gentleman for supplying much new and valuable matter of testimony in the case.—

He might have reinforced his position still further, by adding the experience of the Professor of Surgery in Harvard University on the subject. This gentleman has once at least, if not repeatedly, removed the entire Parotid Gland in a diseased state, and although we believe the particular case we allude to, was made public at the time of its occurrence, we cannot at present refer to it.

Mr Pattison's lecture is, on the whole, an interesting one, and will sustain his reputation as a wrangler, (we use the term only in its scholastic sense,) not less than that which he justly enjoys in an eminent degree as an anatomist. E.

Art. V. — Case in which Copper was detected in the Perspiration.

[Communicated to the Medical Gazette by Sir Henry Halford.]

Sir: I have great pleasure in laying before you the particulars and result of a case of green perspiration, in which, when I had last the honor of an interview with you, you were pleased to express much interest.

Miss ——, æt. 14, had for some months evinced much general debility, when, in September last, she was seized with an attack of rheumatic fever, which yielded to remedies slowly and unsatisfactorily. After some days, during which the perspiration was considerable, my attention was called to a collection of light green perspiration between the toes, and underneath the nails of the young lady's feet, while the same appearance was observable in a fainter degree on the upper, but more especially the under surface of the foot. Having collected a sufficient quantity of this matter, I submitted it to the examination of a scientific and practical chemist. His first experiments disproved my suspicion of its containing iron, and after fusion in a platina crucible, the mass, on being broken and separated with a drop of water, was found to consist chiefly of siliceous matter, intermixed with which (to my great satisfaction) small glittering spangles of copper were sufficiently evident. The experiment was repeated with a smaller quantity of the secretion, and with the same result, leaving me in possession of some minute spangles of the metal.

It was thus clear that the green color was attributable to an acetate of copper, and it only remained to investigate the source of this remarkable fact. An examination of the culinary vessels in common use, (and in which the young lady's breakfast

of milk was regularly prepared) solved the mystery to my satisfaction, inasmuch as the lining of tin had disappeared upon half the extent of their surfaces, leaving the copper exposed. It is somewhat singular, that a day or two previous to this discovery, the mother of the patient had showed to me her tongue, which was swollen and pale in such a degree that I at once said, "You must have been partaking of mushrooms, or some poisonous food:" yet it is fair to state, that the other members of the family, although they had been ailing in one or two instances, betrayed no symptoms corroborative of the cause of the young lady's peculiar state. It appears to me, Sir, that from the above case, some questions of interest arise, namely: It being presumed that the copper was so gradually introduced into the system as to prevent the necessary and immediate consequences of so virulent a poison under other circumstances, was it thus introduced in the form of an acetate? or was the acetate or lactate produced subsequently, by the action of the lactic acid of the perspiration?

I would also ask, if it were possible that the action of sudorific medicines could have elicited that in this young lady, which, under similar circumstances, may have been in a like manner produced in others (at least those who partook of milk, &c, thus cooked) of the family?

I have searched in vain among the older writers for detailed cases of this nature. Sauvages gives them a place in his Nosology, but does not speak of them at large, referring to Borelli for examples of the "sudor colore viridi."

I am, sir, with feelings of much respect and obligation,

Your obedient and humble servant,

JOHN PRICHARD.

Lower Parade, Leamington, Oct. 29, 1832.

MAJENDIE'S CHOLERA PUNCH.

OF six hundred cholera patients at the Hotel Dieu, under my care, (says the Professor,) with the exception of thirty-eight who died in their litters, *all* became warm, and *in all*, the circulation appeared after frictions with camphorated spirit, ammonia and turpentine,—warm beds, bags of hot sand, and the following liquor:

Infusion of Camomile, - - - - - -	1 pint.
Alcohol, - - - - - - - - -	2 ounces.
Sugar, - - - - - - - - -	1 "
Lemon Juice, - - - - - -	q. s.

INTELLIGENCE.

New Enema Apparatus.—Mr Brown, of this city, has sent us an ingenious and a very simple instrument, for the administration of enemata, especially when they are to be employed by oneself. It consists of an India-rubber-cloth tube, about one yard long, and at its due extremity about three inches in diameter, where it is kept open by a hoop of whalebone. From this extremity the tube gradually diminishes in diameter, to the other end, which is attached to a common wooden knob, into which is screwed a wooden tube for the rectum, of the usual form and size. The whole capacity of the instrument is about one pint, and when used, the liquor for injection is poured into the open extremity of the sack, after the other has been duly adjusted, and is pushed into the rectum by the weight of the column of fluid, aided by the thumb and finger of the operator, which are applied so as to compress the tube above, and being carried downward towards the smaller extremity of it, crowd the liquor before them.

We have had but one opportunity, as yet, of testing this instrument by experiment, but where the operation was very satisfactory; and we now think it a valuable addition to the various apparatus which are now in use for this important purpose.

Cholera Expenses.—The Board of Health of New-York has made a report of the expenses incident to the visitation by the recent epidemic. The net amount, after furniture, lumber, clothing and chloride, remaining, are deducted, $110,000. The amount for supporting six hospitals, was $36,222 23: number of patients 2394. The expense of patients at the different hospitals, ranged from $9 60 to $32 84, each; average $15 13.—The pay to physicians amounted to $38,887 38. About 150 physicians were employed. The expenses ranged from $5 to $20 25. The ten physicians who served in Ward 2, declined receiving anything for their services. One of them (Dr Cooper) became a victim to the cholera.

Death of Professor Scarpa.—One more is added to the number of illustrious men who have been taken from us in the course of the present year. Antonio Scarpa died at Pavia, on the 31st October, of a disease of the bladder, in the 86th year of his age. During his illness, he received every attention from his numerous medical friends, some of whom had formerly been his pupils.—This eminent professor was called to the chair of Anatomy at the early age of twenty-two; so that he held the appointment during the extraordinary period of sixty-three years!

COLLECTANEA.

Clinical Observations on the Exhibition of Opium in large Doses, in certain cases of Disease. By Dr W. Stokes, Physician to the Meath Hospital, Dublin.

In the second number of our Dublin contemporary, there is a paper by Dr Stokes, on the effects of opium in inflammatory diseases, which deserves notice. Various practitioners in hot climates have demonstrated the utility of opium, in conjunction with other remedies, in subduing inflammatory affections, as dysentery, hepatitis, and fever; while Hamilton, Armstrong, and many others, have done the same in this country. Dr Armstrong, indeed, and the late Mr Hayden, proposed opium *alone*, in abdominal phlegmasiæ — and Dr Stokes appears to follow in the same track.

"The first form of disease in which the use of opium appears peculiarly advantageous, may be stated to be that of *Peritonitis, occurring under circumstances where blood-letting cannot be employed.* Now, the following are the circumstances under which I have seen this condition of parts to arise:

1st. Peritonitis arising from the escape of fecal matters into the peritoneal cavity, through a perforating ulcer of the intestine.

2d. Peritonitis arising from the bursting of an abscess into the serous cavity.

3d. Peritonitis occurring after the operation of paracentesis in debilitated subjects.

In addition to these cases, which I have myself witnessed, we may add, that low typhoid peritonitis, occurring after delivery, as described by Drs Cusack and Gooch; and the peritonitis which results from rupture of the intestine, induced by external violence."

There can scarcely be a more appalling accident than perforation of the intestine and escape of its contents, among the bowels, with the rapid and dreadful peritonitis that ensues. As this accident generally supervenes on a wasting disease, as intestinal or typhoid fever, there is nothing to be gained by bleeding, as the disease runs a rapid course, and prostration of strength exists from the very beginning. We have, then, two indications (according to our author) to pursue—first, to support the strength of the patient; secondly, to prevent the further effusion into the peritoneal cavity, so that nature may have time and opportunity

to surround what has already been extravasated, by boundaries of coagulable lymph. Opium, in large doses, is the remedy on which our author depends. Two cases are condensed from the fifth volume of the Dublin Hospital Reports, in one of which great relief was obtained, but the advantage was lost by exhibiting an aperient too soon, when all the bad symptoms recurred, and the patient died. The next case was more successful, and our readers will find it quoted in No. XXVIII. of this Journal, page 541. There can be little doubt that, in the case alluded to, there was perforation of the intestine, with consequent extravasation of its contents. The power of bearing opium, (which in this case was given to a great extent) without injury to the nervous system, is very remarkable, and is only explicable by the *pain*, on which the anodyne effects of the opium appear to be expended.

Since the occurrence of these cases, our author has used the same remedy in examples of ordinary peritonitis, where bleeding was inadmissible; and he assures us, that he has had no reason to change his high opinion of its powers. In one case where death took place, the opium was borne without the slightest inconvenience. In two cases lately occurring in the hospital, the same treatment has been pursued with the most striking benefit. A case is quoted from the Dublin Hospital Reports, of hepatic abscess, in which the practice here recommended was first tried.

"I have now detailed cases illustrative of the utility of opium, in large doses, in peritonitis, arising from the introduction of fecal and of purulent matter into the serous cavity. I would further propose it as a remedy in cases of rupture of the bladder and uterus, and in peritonitis after the operation for strangulated hernia. I am at present trying its powers in a case of recent pneumothorax from pulmonary fistula. In two cases of peritonitis after tapping, where the patients were in a low state previous to the operation, the exhibition of these large doses of opium, without drawing any blood generally or locally, has succeeded in my hands in removing the disease, and saving the life of the patient. This appears to be a peculiarly appropriate case for the opium treatment. The patients are generally cachetic, either from original constitution or the disease. They almost all labor under visceral disease and obstruction, and a state of collapse commonly follows the operation. All these circumstances go strongly against our use of the usual antiphlogistic treatment; it was in a case of this kind, which occurred in the old Meath Hospital, in the year 1822, that Dr Graves first ascertained the great importance of opium in this disease. A woman had labored under ascites, for which she was tapped; the operation was followed by the symptoms of peritonitis.—When Dr Graves saw her, she appeared in the last stage of the

disease; she had constant vomiting, hippocratic countenance, cold extremities, the belly exquisitely tender, and the pulse 160 in the minute, and nearly imperceptible. The case appearing hopeless, Dr Graves determined on merely endeavoring to allay the distressing symptom of vomiting, and administered a drachm of laudanum. The patient soon after fell asleep, and awoke refreshed, with a more warm surface, and fuller pulse; the vomiting had ceased. The same remedy was used in smaller doses every fourth hour, and in the course of two days all the unpleasant symptoms had disappeared.

I now proceed to submit some cases of diseases of mucous membranes, where the use of opium has proved efficacious.—From having witnessed its utility in cases of inflammatory states of serous membranes, where the inflammation might be termed, for want of a better name, *asthenic;* it appeared probable, that the same condition of mucous membranes might be benefited by it.

It is now some months since I was called to see a gentleman laboring under all the symptoms of gastro-enteritis, in a severe form. He had considerable fever; thirst urgent; constant smacking of the lips; respiration hurried, *without disease of the respiratory system;* a red tongue, and great tenderness of the belly. The usual treatment was pursued, but the disease showed great obstinacy, and after six weeks' continuance, the situation of the patient appeared hopeless. At this time a violent bronchitis supervened, and so great were the sufferings of the patient from the accumulation of mucus in the trachea, that, on three occasions, I left him, never expecting to see him again. It was remarkable, that, during this attack, the symptoms of abdominal disease greatly subsided. Under a stimulating treatment, he recovered from the bronchitis, only to relapse into his former state. The abdominal symptoms now became still more urgent; the belly swelled from tympanitis; the verge of the anus became surrounded by large and irritable hæmorrhoids; there was extraordinary prostration and constant low delirium. Under these circumstances, a diarrhœa supervened, at first slight, but afterwards so severe, as to threaten every day death from exhaustion. A great variety of means were tried, but without avail. At this time, when the patient seemed in articulo mortis, I ordered him a grain of opium every hour; this he took regularly for the first twelve hours, *without any inconvenience;* and he experienced some refreshing sleep. Next day the remedy was continued in the same dose every second hour, and from this time his improvement was rapid; and I rejoice to say, that he is now in the enjoyment of good health."

This was a fair case, Dr S. observes, for the employment of this *heroic* remedy, since all other means had failed. The next

case is one to which he confesses he cannot but look on with pleasure, was that of a patient who was admitted in February, into the Meath Hospital, complaining of sore throat and shooting pain through both ears. His countenance was haggard — voice raucous — body emaciated.

"An extensive and unhealthy-looking ulcer, covered with a whitish matter, was found to occupy the left tonsil, the back of the pharynx, and left side of the uvula. The patient denied having had venereal, but circumstances led us to suspect this; he had, however, been frequently salivated in India for abdominal disease and fevers. He first felt the soreness of his throat six weeks before admission, which was the time when his vessel made the British Channel. We ordered the patient the sarsaparilla decoction, with nitro-muriatic acid, and touched the sore with a strong solution of nitrate of silver, which caustic was changed in some days for the butter of antimony. No good effect was produced by these means; the sore extended quite round the uvula, which it rapidly destroyed. The breath became fetid; the cough laryngeal; the patient's appearance was still worse than on admission; his nights were sleepless, and he complained much of pain in the head.

I now changed the plan of treatment; omitted the sarsaparilla and the lotion, and ordered a gargle of chloride of lime, with the internal use of six grains of opium daily, and an increase of his wine. At once the sore began to assume a more healthy appearance; the fetor of breath diminished greatly, and in a few days wholly disappeared. After a short time, in consequence of want of sleep, we increased the dose to eight grains, on which he has been kept since the 20th of February. The sore is now healed, and the whole state of the patient singularly improved."

At the time of writing, there was in the Meath Hospital, a woman, who, for an enteritis, had taken 18 grains of opium in 48 hours. Previous to the exhibition of opium, there had been retention of urine, which gave way under the administration of the remedy.

"Hitherto I have alluded to the employment either of simple opium, or its tinctures. In Dr Bardsley's interesting collection of Medical Observations, several cases are detailed, where, in affections of the stomach, the acetate of morphia was employed with benefit. I am persuaded, that it is a remedy of great power, particularly in chronic cases of dyspepsia, where there is much acidity. I was consulted some months back by a gentleman who has led a very dissipated life, and who, for the last ten years, has been a martyr to the worst symptoms of dyspepsia.— About two years ago, he had a violent attack of hæmatemesis, and latterly the stomach had become so irritable, that it was scarcely possible to find any article of diet to agree with him.—

His sufferings were dreadful. After trying other means ineffectually, I ordered the $\frac{1}{8}$ of a grain of the acetate, twice a day. He took the remedy three times in the day, with the most perfect relief. The secretion of acid, which had been enormous, was suddenly checked, and the patient in two days declared that he felt better than he had done at any time for the last ten years. His appetite was good, and he foolishly indulged in articles of diet from which he had long abstained. On the fourth day, while in the highest spirits, he became pale, fell, and threw up several pounds of blood. The remedy was, of course, omitted. In about a fortnight, all the former unpleasant symptoms returned, and his indigestion was as complete as ever. I now ventured on exhibiting the morphia again, but in the doses of the $\frac{1}{16}$ of a grain, twice in the day. This diminished dose again produced the same improvement, but in a few days was followed bya return of the hæmatemesis.

The next case, is one of a gentleman, who has been for a length of time in the East-Indies, and who has become a victim to hepatic disease. He is subject to attacks of pain in the epigastrium, followed by jaundice and fever. These have been treated by leeching, purgatives, and the use of mercury; but during the last attack, his debility was so great, that I did not wish to venture on this treatment. The acetate of morphia was given twice a day. It was commenced on the 26th of December, and continued till the 18th of February. The greatest improvement has been made in this gentleman's state. The pain has disappeared; there is now no tenderness; the jaundice has subsided, and what is most remarkable, his bowels now act regularly, without the assistance of medicine. He has gained flesh, and his whole appearance is singularly improved."

We have now only to append the conclusions to which our author has come, relative to the exhibition of opium.

"1st. That in certain cases of inflammation of serous and mucous membranes, where depletion by blood-letting, or other antiphlogistic measures are inadmissible, and the system in a state of collapse, the exhibition of opium has a powerful effect in controlling the disease.

2d. That under these circumstances the remedy may be given in very large doses, with great benefit and safety.

3d. That its effect, then, is to raise the powers of life, and remove the local disease.

4th. That the poisonous effects of opium are rarely observed in these cases; the collapse and debility of the patient appearing to cause a tolerance of the remedy.

5th. The cases in which the utility of this practice has been ascertained, are as follows:

Simple peritonitis, in a stage where bleeding cannot be per-

formed. Low puerperal peritonitis. Peritonitis from perforation of the intestine; from the opening of an abscess into the sac; or lastly, after the operation of paracentesis, in debilitated subjects. Violent diarrhœa, supervening in an exhausted subject. Phagedenic ulceration of the throat, in a similar individual.— And cases of chronic gastritis, and gastroduodenitis in patients exhausted by the long continuance of the disease.

6th. The cases in which this mode of treatment would be probably useful, are — peritonitis from rupture of the bladder, or uterus, traumatic rupture of the intestine, or after the operation for strangulated hernia.

The last observation which I shall make here is, that in most of these cases, particularly in those of diseases of serous membranes, wine was given in conjunction with the opium, and in all, the patients were supported by a lightly nutritious diet."

This paper is certainly interesting, and the subject important. On this account, we have laid a full account of it before our readers. — *Medico-Chirurgical Review.*

Erysipelas, treated by Mercurial Inunction.

Dr Broussais has repeatedly employed this method, with very satisfactory results. The parts affected are to be gently rubbed with a mixture of equal parts of "onguent Napolitain" and of lard. The cases suited to this practice, are such as supervene to diseases by which the body has been much weakened, and in which the inflammatory action is feeble. — *Anal. de la Médéc Physiol.*

Endermic Therapeutics.

The method followed in France, is as follows:—Apply to the skin, which we wish to deprive of its epidermis, a portion of ammoniacal pommade, which is made of equal parts of lard and the strong liquor ammoniæ, and renew the application in five minutes; in five minutes more, the blister will have risen, and we then remove the epidermis, and sprinkle the raw surface with the medicament. Half a grain of acetate of morphia, applied on a blistered surface near the origin of the sciatic nerve, has, in twenty-four hours, cured a severe neuralgia of the limb; and sulphate of quinine has, when similarly used, quickly put a stop to an ague, when the medicine could not be administered inwardly.—*Ibid.*

Mode of Dressing a Stump, after Amputation of the Thigh.

While the assistant draws down, with both his hands, the skin and muscles over the face of the stump, let the surgeon pass a

bandage round the pelvis, and roll it regularly and firmly around the limb from the hip to the wound; apply the two cut surfaces neatly together, and retain them there by cross pieces of bandage, secured by a turn or two of the roller: over these put a piece of simple dressing, and a pad of soft lint, which are also kept in their place in the same manner, without the use of any adhesive plaster, which are condemned as highly irritating to the wound. — *Journ. Complement.*

[We quite approve of the above method, and have repeatedly observed the pernicious effects of applying adhesive plaster to large wounds. It gives us pleasure at the same time, to find that union by the first intention is now admitted into French surgery.] — *Ed. Med. Chirurg. Rev.*

Ingenious Method of applying Nitras Argenti to Ulcers of the Cornea, &c, &c.

Take a silver female sound, or large silver probe, and heat an inch of its extremity in the flame of a candle; then rub lightly upon it a stick of the lunar caustic; the salt is immediately melted, and unites with the metallic surface, coating it with a thin layer of caustic; if it be too thin, we have only to repeat the same process. When the instrument cools, it must be wiped clean, and then it is ready for use. — *Bullet. de Therap.*

Syphilis treated by the External Use alone of Mercury.

M. Malapert, a military surgeon, communicates the results of his experience, which, he states, is highly in favor of merely employing a strong solution of the corrosive sublimate, without any internal medicine. He has, in this manner, cured chancres of the throat, lip, penis, anus, and legs, by using a lotion of eight grains to an ounce of distilled water, and applied with a camel-hair pencil. Chronic buboes he blisters first, in order to remove the cuticle, and then he cauterizes the denuded surface with a solution of a scruple of the sublimate to the ounce of water.— *Révue. Med.*

[We can confirm the accuracy of M. Malapert's remarks, by appealing to numerous cases of primary syphilis, which we have for several years past treated in the above way. The surface of the sore is rendered white on the application of the strong wash, and the surrounding skin is cauterized; the diseased action appears to be speedily changed, and we find, in the course of a few days, perhaps a much larger exposed surface, but certainly one that is much healthier, and disposed to cicatrize quickly, instead of the obstinately-indolent base and callous edges, so character-

istic of the true chancre. Once or twice, we have discussed chronic glandular tumors, by the topical use of the corrosive sublimate lotion. — *Rev.*

Cholera Anecdote.

A gentleman recently returned from Paris, informs us that it was most amusing to study the French character, when cholera made its first alarming onset in the metropolis. The cafés were crowded with persons, of all descriptions, calling for "punch à Majendie;" nothing else was drank, and many a severe griping belly-ache was the consequence; but, in addition to this punch, every one took to cigar-smoking, and you might see in the streets, as you passed along, those who had not served their noviciate to the practice, laying hold of any rails or balustrade, and retching and vomiting after every whiff; yet they must nobly persevere, for nothing was so effectual a preservative as smoking, they were told. If any looseness came on, it was often no easy thing to ascertain, whether one of these "jeunes hommes de tabac" were really affected with cholera, or only with the effects of the smoke. So great was the demand for cigars at first, that our friend for some days could not obtain one, at a dozen or more shops where he applied. — *Chirurg. Rev.*

Use of the Trephine in Epilepsy.

The following interesting case has been furnished us by Professor Dudley, being the sixth of the sort which has occurred in his hands. The other five cases were related in his paper on "Injuries of the head" published in the first number of this Journal. The success of this practice establishes two important principles in Surgery; — 1st. That the brain will bear severe mechanical irritation for a great length of time, without fatal disorganization; and 2dly. that the use of the trephine under such circumstances may restore the organ to its former healthy condition. The cases of Mr Cline, first published, we believe, in the paper just referred to, bear only a slight resemblance to those of Prof. D. and are not meant by him, or by Sir Astley Cooper, who has since noticed them, to establish these principles so valuable in practice.

Mr ——— received a gun-shot wound on the head in the month of March, 1832. On examination next day, his physician took from the wound a number of small bones, when, by reason of an injury done the dura mater, some brain escaped. So soon as the bones with the disorganized brain were removed, he was dressed, and at the expiration of two months he was thought to be well. The patient states, however, that a slight discharge continued to issue from the wound, and after some

months Epileptic convulsions, with a great derangement of the general health, ensued. It was then discovered, on examination, that the matter issued from the surface of the brain, and that the cranium appeared to be diseased. Under these circumstances he came to Lexington for assistance, his friend having furnished the preceding narrative.

On his arrival here his general aspect was that of an individual who had suffered greatly from derangement of the cerebral and chylopoetic functions. A cicatrix of two and a half inches in length, on the central and posterior portion of the right parietal bone, pointed out the original injury.

On two points of the cicatrix were discovered small sinuous orifices, from whence was discharged an unhealthy pus. By the aid of a common probe diseased bone was detected.

The trephine was applied in the direction, and on one side of the original fracture. So soon as the segment of bone was removed by the trephine, isolated portions of bone were discovered beneath the dura mater, in a cavity of some dimensions occasioned by the absorption of the brain. Three of these, amounting in size to the thumb and finger nails, were removed, together with a morbid growth from the surface of the wounded dura mater. Simple dressings were then applied, and renewed occasionally for the week, when the patient was discharged, free from all embarrassment, both in the corporeal and intellectual functions. — *Trans. Jour. Med.*

A Case of Hereditary Hæmorrhagic Tendency. By James N. Hughes, M. D. of Simpsonville, Kentucky.

In the IV. vol. of this Journal, page 518, I gave an account of a case of Hereditary Hæmorrhagic Tendency, ascertained to be universal among the male members of the family in which it exists ; the females being, at the same time, as universally exempt from it. Since the publication of this case, I have met with one of the same character, in another and entirely different family, a succinct history of which I propose now to give, simply for the purpose of calling the attention of the profession more particularly to this singular disease, for such it should undoubtedly be considered.

On visiting the house of a respectable farmer of this neighborhood, my attention was directed to the case of a youth ten or twelve years old, which appeared to be rheumatic, and which was so pronounced. The correctness of my opinion was called in question by an old lady present, who was herself a member of the family, and intimately acquainted with the history of the case. On further inquiry I ascertained it to be one of hereditary origin, the rheumatism being only the sequel of another affec-

tion to which the boy had been subject from infancy, viz. hæmorrhage. Learning that this disease was common in every branch of the N. family, of which that of my friend Mr P. was one, I inquired particularly concerning it, when the following facts were communicated :

1st. That spitting, vomiting, and purging of blood; bloody urine; bleeding at the nose; extravasations of blood among the muscles and integuments of the body generally, especially of the extremities, producing dark discolorations and swelling, attended frequently, after a few days' continuance, with obtuse pain and stiffness, and copious and obstinate hæmorrhage, from very inconsiderable incisions, on whatever part of the body they are made, have been exceedingly common among the male members of the connection.

2d. That the Hæmorrhage, whenever it has manifested itself, has been invariably attended with rheumatism to a greater or less extent.

3d. That the slightest sprains or contusions have generally been followed by rheumatism of the part.

4th. That the majority of the males, who have arrived at old age have been much disabled by rheumatism.

5th. That on the approach of old age, the tendency to hæmorrhage has been less manifest.

6th. That a considerable number of males have died in infancy and childhood.

7th. That deaths immediately from the loss of blood have been frequent; several resulting from the employment of the lancet, some from accidental wounds, others from various internal hæmorrhages, and two of the number, simply from the application of blisters, — "*the blisters*," in the language of my informant, "*drawing blood instead of water.*"

8th. That of the two diseases, hæmorrhage and rheumatism, the former has always maintained the priority.

9th. That the females, though in no instance sufferers from this predisposition, have, nevertheless, invariably transmitted it to their offspring.

And 10th. That the predisposition in question can be satisfactorily traced as far back as the fourth and fifth generation.

We present the above as facts, upon the authority of several intelligent and highly reputable members of the family to which they relate; a personal acquaintance with whom, enables us to repose the utmost confidence in their communications.

By comparing this case with that previously published, they will be seen to exhibit a striking parallel in every important particular. In both, the tendency to hæmorrhage seems to depend mainly, if not entirely, upon the morbid condition of the capillary system; there being in neither, with the exception

noticed in the account given of the first case, any morbid manifestations on the part of the larger blood vessels. The cause of this remarkable diáthesis is, to us, shrouded in darkness; and it will perhaps appear hereafter, that post mortem examinations alone are capable of revealing its true character. When it was first presented to us, we regarded it as one of those rare anomalies in physiology, occasionally met with by physicians. But since our limited opportunities for observation have brought under our notice two distinctly marked cases, we are induced to suspect that it is not so unfrequent an occurrence as it was at first supposed to be; and although it has not yet been thoroughly investigated, it has not entirely escaped the attention of those who have been extensively engaged in the practice of medicine. If, as suggested, the affection spoken of, be not so uncommon as was supposed on first consideration, it is a question meriting much attention, whether it is susceptible of mitigation or relief? It is true that most hereditary maladies have proved extremely difficult of management. But on the other hand, it is not less true that, even here, the efforts of the profession have contributed materially to mitigate the sufferings of afflicted humanity.—*Ibid.*

Delirium Tremens.

Of 43 patients laboring under this complaint, M. Pauli has lost but 1, and in 12 cases has been enabled to stifle it in its beginning. His grand remedy is fresh *ox gall*, in a dose of from 3 to 6 drachms, (gros) in from 4 to 6 ounces of peppermint water, infusion of valerian or calamus aromaticus. Same time, the patient takes half a glass of brandy in the morning, and at night one or two grains of watery extract of opium. — *Rust's Mag.*

Of the Incontinence of Urine.

Is it beneath the dignity of the subject to inquire why children pass urine in bed? Many a little urchin might be spared his flogging, if the very simple cure was known. I remember to have seen a child brought into the hospital, where a cord tied round the penis, to spare the jade who attended him the trouble of raising the child from bed, had cut through the urethra. Boys have been made miserable, during what should be the happiest period of life, from this circumstance alone. I have known a man of twenty, kept from a public education owing to the same cause. And very lately a young gentleman confessed, that when visiting neighboring families in the country, he was under the necessity of sitting up all night, lest he should disgrace himself by passing urine in the bed. If all this will not prove the importance of the matter, I can add a case more professional and

grave: — I have known a young man suffer a long and painful attendance on a surgeon, going through a course of medicine, with the use of bougies to remove this complaint, which he might have got rid of, as I shall show, by turning himself round. This occurrence never takes place, but when the boy is asleep on his back; and the cure is a simple one: he is to accustom himself to sleep upon his face or side; the urine is not passed, nor is he excited to dream of making urine while he keeps this position.

This circumstance is unaccountable, until we reflect on the position of this master-spring of the muscles of the bladder — the sensible spot a little behind and below the orifice of the bladder. When a person lies upon his belly, the urine gravitates towards the fundus; but when he lies on his back, it presses upon this sensible spot, and distends that part of the bladder which is towards the rectum. If, when the bladder is full, we press upon the lower part of the belly, we feel very distinctly that the pain excited is in this spot, near the orifice of the bladder. If, in a morning when inclined to sleep, we are sensible of a similar pain, and a desire to make urine, by a change of posture, turning so as to lie on the belly, the sensation, and the necessity of rising, are removed. When a child wets the bed, it is in consequence of a dream, excited by the irritation of this sensible spot of the bladder; it is cruel to chastise the child; and raising it frequently to make water, does not mend the matter. But if the child be made to lie on the belly, or inclining to that position, with the cheek upon the pillow, the habit will be broken.

Boys are subject to a more serious incontinence, troubling them night and day, attended with inflammation and pain, and all the symptoms of stone in the bladder.

Stillicidium urinæ, from want of action in the sphincter muscles, is generally owing to the same cause, an increased sensibility of this spot of the bladder. —*Mr C. Bell on the Diseases of the Urethra.*

Earle On the Treatment of Burns.

It is well known that in consequence of the contraction of the cicatrix, that the most distressing deformities often occur, especially when the burn has occurred in the flexures of joints, and in the front of the neck. Mr Earle has known the chin drawn down upon the sternum; and the shoulder approximated by the partial absorption of the clavicles — the forearm permanently bent upon the arm, so as to bring the thumb in contact with the point of the shoulder, &c. These deformities Mr E. asserts may, by due attention, be generally avoided.

"I am quite ready to admit," he observes, "that it is not in our power to arrest the law of nature by which a cicatrized sur-

face becomes smaller, and occupies less space, than the original wound ; but it is in our power, in most cases, to direct and modify that which we cannot wholly prevent, and thus, at all events, to counteract its injurious effect. We cannot prevent the process of absorption which has been described, but we can prevent its taking place in a direction which may interfere with the healthy functions of the part. To take the upper extremity as an example, I will suppose a case, where the whole integuments on the inner and front part of the arm and forearm have been destroyed. If such extremity be carefully kept extended on a splint, not only during the whole progress of healing, but long subsequent to the perfect cicatrization, you will find that the cicatrized surface will diminish in a circular direction, drawing the healthy integument together from side to side; but that no contraction will take place in the long axis, in which alone it can impede the due motions of the limb. This permanent extension should be persevered in during the day and night, until all changes have ceased, and the cicatrix has contracted to its smallest dimensions. Care, however, should be taken, during this time, to give passive motion to the different joints ; by which the proper secretion of synovia will be kept up, and the eventual free use of the limb will be ensured.

"This plan of maintaining the limb in a state of permanent extension, should be commenced as soon as the wound has begun to granulate, and should be persevered in, as before stated, until all changes in the cicatrix have ceased. If this be not commenced thus early, the joint will soon be found slightly bent, and any attempt to extend it, will then be productive of pain, and will cause the wound at the flexure of the joint to bleed — perhaps to slough. I am aware that many persons permit such limbs to remain in a bent position during the healing process, from an idea that there will be a smaller extent for cicatrization, by thus allowing the ulcerated surfaces to approximate each other, and that they thereby will much accelerate the healing. By such practice the permanent benefit will be sacrificed, to remove a temporary evil ; the wound may possibly be healed sooner, but the limb will forever after remain stiff and useless. In very many cases, however, not only will most serious injury infallibly accrue from such practice, but even the temporary advantage proposed to be gained, will prove entirely fallacious; for every attempt to extend a limb which has been thus treated, and which has formed an angle, will crack the cicatrix, and cause it to ulcerate and slough on its surface, even for months after the apparent healing of the wound. If, therefore, any argument were requisite, in addition to that of preventing deformity and lameness, to induce you to bestow great attention to position, during, and long subsequent to, cicatrization, in all instances where the

wounds are in the neighborhood of joints, I am fully convinced, from extensive experience, that you will thereby gain much time in effecting a permanent and perfect cure. In the one case, where there is any constant stress on the cicatrix, it will become diseased and indurated, and liable to crack and ulcerate; in the other case, where no such strain is applied, the wound will heal more rapidly, and the cicatrix will be far more soft and healthy."

In endeavoring to counteract contractions in different parts of the body, very different modifications of splints and a variety of apparatus will be required, which the necessity of each particular case will dictate. In cases of severe burns of the extremities, including the flexure of any joint, the employment of permanent extension on splints will commonly be sufficient to answer every indication; but in burns about the neck, and at the lower part of the abdomen and groin, much ingenuity will sometimes be required to attain the desired ends. It may, however, occasionally happen, that all our efforts will prove unavailing, and an unseemly cicatrix and permanent lameness will be the result.

"In such cases, which have resisted all our efforts to prevent these disastrous occurrences, it will be in vain to attempt, by operations, to correct the evil; for the same difficulties which opposed themselves in the first instance, will equally baffle all our efforts at remedying the existing defects. Cases are, however, too frequently occurring, where most unsightly deformities and serious lameness are the results of inattention, and a total disregard to the rules which have been laid down as necessary to be pursued to prevent such consequences; and many of these cases admit of being partially, if not wholly, restored, by a plan of treatment which I shall now proceed to detail. It will be right, in the first place, to offer a few observations on the structure and nature of the diseased and indurated cicatrices which follow the healing of burns. Whenever any unnatural contraction follows a burn, the cicatrix becomes more or less indurated and callous; sometimes to a most extraordinary extent, so as to merit the epithet of scirrhous. To what are we to attribute the more frequent occurrence of such indurated contraction after burns, than after any other description of ulcers? This is a question not easy to solve; but I believe it, in many cases, to depend on the constant state of irritation and chronic inflammation which is kept up by the continual stretching of the part affected, in the vain attempts made to extend the limb. That this may fairly be considered as one fruitful cause of such defects, may be inferred from the fact, that when a limb, under apparently similar circumstances, is kept extended during and after the healing, no such diseased cicatrix will result. Still, however, it must be admitted that, in some parts of the trunk, where no such contraction can operate, the cicatrices after burns form

prominent ridges, and are morbidly hard; probably in consequence of the extensive destruction of the subcutaneous cellular tissue. This will at times amount to an increased morbid growth, to a considerable extent, which will have, when cut into, all the characters of a true scirrhous. Such a case occurred to me, some years since, in the person of the young female, of whose neck I now present you a drawing, exhibiting prominent pendulous tumors, one of which I removed, and approximated the healthy integuments, in hopes of obtaining union by first intention. Erysipelas supervened, and the surface granulated; and after it had healed, the same diseased growth returned nearly to the same extent. This is the only instance of the kind which I have met with, and it appeared to depend on some peculiarity of the individual, as the whole original cicatrix was freely removed. When such a horny web or cicatrix, as I have described, has contracted any joint, or the neck, it would appear, to a superficial observer, that the whole evil depended on the contracted integuments, by a simple division of which the limb would be instantly set at liberty. So deceptive is this appearance, that I have known, more than once, that surgeons have indulged this vain hope of affording relief, until a painful and ineffectual operation has convinced them of their error. In recent cases, occurring in any of the extremities, the contraction may be confined to the integuments, by dividing which the deformity may for a time be removed; but the same cause continuing to operate, will produce the same effect, and the cicatrix will again contract after the wound is suffered to heal up. When the contraction has been of longer duration, the muscles acquire a new sphere of action, and afford an additional and powerful opposition to the free exercise of the limb. Lastly, in some cases we find that even the bony fabric becomes moulded and altered by the powerful constriction exerted on it by this gradual but certain process.—In such cases it is hardly necessary to add, that the most severe operations cannot afford a prospect of even temporary alleviation. From having witnessed several such operations, and the repeated and ineffectual transverse division of such contracting bands, I was induced to adopt a different mode of proceeding in a case which fell under my care, at the Foundling Hospital, in the year 1813. Being aware of the inefficacy of the transverse incision, I removed the whole diseased cicatrix, and endeavored to approximate the healthy integuments from the two sides of the arm, which was kept extended on a splint, not only during the healing of the wound, but for a considerable time after the new cicatrix had formed, until, indeed, all those changes which I have described had been fully accomplished. By such a practice, I conceived that the contraction, which I knew must follow so extensive a wound, would take place in a lateral direction, and not

in the long axis of the limb: in a word, I hoped to be able to *direct* and *modify* that which it was not in my power to prevent.—The success which attended this operation exceeded my most sanguine expectation. The boy's arm was perfectly restored, and remains straight to this day."

Mr Earle has since successfully operated upon more than twenty cases. The happy results of the first operation led him to apply the same principles to the *prevention* of such accidents, by regulating the direction of the contractile process, during and after the healing of large wounds in the neighborhood of joints, and with the best possible effects.

Mr E. has found the ingenious apparatus invented by Mr James, for maintaining the chin elevated after operations for relieving contractions of the neck, with certain modifications, most beneficial also in preventing such contractions. In slighter cases, the wearing, night and day, a stiff soldier's collar, will be a sufficient protection against contraction, provided the integument immediately below the chin be not burnt. Contractions of the fingers, hands, and arms, may be often restored at a very distant period from the receipt of the injury. Mr E. relates one case relieved, which had existed for sixteen years.

"In performing operations for the removal of contractions, it will generally be better to excise the indurated cicatrix, although in some cases it may be divided on both sides, and dissected upwards or downwards, leaving it attached at one extremity; some portion will thus be retained, and the extent of the wound will be less. In several cases, however, where this has been attempted, the detached cicatrix has sloughed, and no time has been gained. As the cicatrix is not a part of original formation, it possesses less vitality, and is often very imperfectly nourished; when, therefore, only partially detached, it will generally perish. It often happens, that but little apparent good is effected at the time of the operation; but, by gradually extending the limb, in a few days the muscles and soft parts yield, and the contraction will be gradually removed. This occurs in a marked degree in contractions at the elbow, and of the wrist and fingers. Too forcible an extension should not be attempted at first; but, with the assistance of graduated splints, a little may be gained from day to day, until the limb is perfectly restored.

"It has been stated, by some surgeons, that this plan will not succeed permanently, and that the contraction will return after an apparent cure. In reply to such objections, I can only state, that, in my own practice, I have never met with such a failure; and that I have investigated, with care, the alleged cases of return, and have, in each instance, satisfactorily proved, that the failure arose from the want of perseverance in the plan after the closing of the wound — from a want, indeed, of a sufficient

knowledge of the principles on which the practice is founded, or a want of sufficient perseverance and patience on the part of the surgeon. I have been lately informed, that, in some cases, Mr Hodgson has succeeded, by mechanical extension, in removing the contraction, without any surgical operation. I have no doubt that this may be effected in some cases. I have lately adopted this practice in two instances: the first was for a contraction in front of the neck, which was greatly benefited by the girl wearing a very firm collar for a considerable time; the other patient is, at the present time, in the hospital in Harley's ward: a lad, who had been burnt with lightning, came in with his knee-joint contracted nearly to a right angle; with the assistance of a powerful double screw, the leg has been extended; but in this latter case the whole cicatrix has ulcerated, and the tendon of the biceps muscle can now be seen. In this instance I do not think any decided superiority can be claimed in favor of the extension in preference to excision, as the present wound is as large as would have been made by the operation, and more time has been lost."

Mr E. states, that in looking over the pages of Hildanus, he was struck with a rudely executed wood cut, delineating an apparatus for restoring a contracted hand; and on further investigation, he found that this writer had perfectly succeeded in a very bad case of retroversion of the finger from burn, in completely restoring the use of the hand, partly by an operation, which was succeeded by a simple but powerful mode of effecting permanent extension.

Although we have already borrowed so largely from our author, we must be permitted to quote his concluding observations, because they display an instance of candor which reflects more honor upon him, than would the establishment of the claim to originality in the mode of treatment. He states, that in reading Hildanus, he

"Found some admirable directions for retaining the limbs extended whenever the injury occurred in the neighborhood of important joints; directions which modern surgeons would have done well to adopt. I further found, that in his chapter on burns, nearly all the boasted improvements and suggestions of later days were mentioned, although, from a want of knowledge of the use of the absorbents, and other modern discoveries, the facts are explained on erroneous principles. It affords me much pleasure to rescue from oblivion the well-earned reputation of this celebrated surgeon, and, in relinquishing my own claims to originality in the operation, to render him that praise to which he is so justly entitled:—'Palmam qui meruit, ferat.'" —*American Jour.*

On the External Use of the Cod-Liver Oil, in the Impetigo Scabida, &c.

Dr Marshall Hall, in a note in the London Medical Gazette, for September last, states, that in some troublesome affections of the skin, especially of the hands, conjoining the characters of impetigo, with erysipelatous redness and swelling, and inducing the most severe suffering, he has speedily succeeded in restoring the cutaneous textures to a healthy condition, by the external use of the cod-liver oil, after all other remedies had been tried fruitlessly.

For rhagades or chaps, it is, he says, a preventive and speedy cure; and it is productive of great benefit in eczema, and other diseases inducing excoriation and fissures of the skin.

Excoriated Nipples.

According to Dr Bursharat, pyroligneous acid, mixed with white of egg, is an excellent application for excoriated nipples, even when attended with great irritability. — *Gaz. Med.*

On the Antiquity of Craniology, by the Marquis Moscate; and the Phrenological Developments of his Head.

When I addressed my first letter, I had not the least idea that it would be made public beyond the walls of this room. Had I foreseen it, I am certain I should not have mentioned names.— But since the Editor of The Lancet has done me the honor of printing it *verbatim*, with his remarks, I thank him, and candidly declare, that if I am anything, I do not deserve all the eulogies which have been kindly bestowed on me. I long ago experienced the evils of notoriety, and, *crede perito*, all the good intentions of those who know me, will be of no use to a man who has never been lucky. However, as *factum infectum fieri nequit*, I will not think of the past, but now request the favor of reading the present letter to the members of the Phrenological Society, to have it recorded in your reports, if it deserve mention, but then it must not be published.

Among the fragments which have reached us, from the numerous works of Ennius, I remember the following:

> "Non habeo denique nauci Marsum Augurem,
> Non vicanos aruspices, non de circo astrologos,
> Non isiacos conjectores, non interpretes somnium;
> Non enim sunt ii aut scientia, aut arte divini;
> Sed superstitiosi vates, inpudenterque harioli,
> Qui sui quæstus causa fictas suscitant sententias,
> Qui sibi semitam non sapiunt, alteri monstrant viam;
> Sed sapientibus qui mentis penetralia
> Recte scrutantur, iis præbeo fidem."

This long quotation seems *à propos* with regard to phrenology. There are among the phrenologists many whom I call *quacks*, and they, of course, deserve to be despised; but the *true phrenologists* must be respected, for they are very useful to mankind.—I mention nobody, but you may easily guess what I mean.

Now before I answer the just remarks of Dr Moore, allow me to add a few observations on the knowledge which the ancients possessed of this branch of philosophy, and the great benefit they derived from its application. I know that several of them were called physiognomists and sophists, but I am certain that they were practical phrenologists. In fact, what gives the expression to the countenance? Is it not the moral, intellectual, and sentimental faculties? Are not those faculties the emanation of the brain? Therefore the ancient physiognomists were phrenologists, and they *felt the cranium exactly as we do.* I must, however, say, that they had not arrived at the same degree of perfection and accuracy as are conspicuous at the present day, and that the classification of the organs was most probably unknown to them. Socrates, however, appears to me to have had a profound knowledge of craniology; and I think that to relate to you how that great philosopher became convinced of the accuracy of this science, may prove interesting.

At that epoch there lived in Greece a philosopher, who like Gall, was laughed at and despised, because he asserted, that by the examination of the head and countenance of an individual, he was able to discover *his general character*, and *his principal propensities.* His name was Zopyrus, and Cicero reports the following anecdote in his Tusculan questions. One day the adversaries and mockers of Zopyrus persuaded Socrates to present himself in disguise before the Greek Gall. Zopyrus examined diligently the forehead, and the animal portion of the cranium of Socrates, and then said, that he *might now be good*, but that he *had once possessed, and had still, very bad natural propensities.* This observation caused general laughter among the spectators; but Socrates did not laugh, and with great composure assured his friends, that what Zopyrus had advanced was very true; that he had been obliged to make use of continual exertion to conquer his bad natural inclinations, and that he still *daily* combated to be what he was. From that day Socrates was observed to have often recourse to a looking-glass, and to *feel his own head* before it; and having been asked why he did so, he answered, that he studied *to mend his defects.* Another similar anecdote was related by Aristotle to Alexander the Great, his pupil, and I will give it here; perhaps it may be new to some of our auditors.

Hippocrates, while living, had the reputation not only of being a great physician, but a virtuous and upright man. His disciples and contemporaries almost adored him. At his epoch there was

a philosopher called Philemon, who also professed to discover the character of individuals from the examination of their countenances and heads. The pupils of Hippocrates demanded his opinion with regard to their master, and Philemon, having previously examined Hippocrates, said, that he was naturally *luxuriosus et deceptor*, (inclined to luxury and deceit.) This opinion offended so much the medical students and admirers of Hippocrates, that they assaulted the poor Philemon, and would probably have dissected his body, had not Hippocrates prevented them, by observing that Philemon had spoken the truth; that "*se amore philosophiæ ac honestatis omnes sui cordis concupiscientias ejecisse, et studio ac abstinentia conquisisse quod prius ejus naturæ negatum fuerat.*" I could here report some other ancient anecdotes to prove my assertion still better, but I should be too prolix.

I come now to my ownself, and while I write, the cast of the unfortunate Moscati is before me. Gall often told me, that if I would study craniology on myself, he was convinced I should not be long an anti-craniologist; and I confess that he was right, for I find that from the organs of my cast, I recognise my feelings, my passions, and my intellectual and sentimental faculties, and I advise those who do not believe in the science to have their casts taken, and impartially and conscientiously to examine themselves according to the development of their organs, and if they find that their feelings, passions, and propensities, do not answer to the *combination and relation* of the prominent organs, then they may continue as I did in their incredulity. I am, however, convinced that by these means the most obstinate adversaries will become the best promoters of phrenology.

Dr Moore wished to know whether, in the development of the organs of my cranium, there was to be found any reasonable ground to explain *phrenologically* my stubborn obstinacy against craniology. I must here observe that the principal cause of my obstinacy was the great respect, and *almost adoration*, which I professed for my tutor, the celebrated Father Andrez, the author of the Course of Universal Literature. He had been a Jesuit, and after the expulsion of that order from Naples, had remained in my family, and with the most assiduous zeal had given me the best classical education. It is to him that I owe the little I know of the Hebrew, Chaldaic, Samaritan, Arabian, Greek, Latin, and Illyrian languages. When Gall was named before him, he always made the sign of the cross, and told me that such a man deserved to be excommunicated, and that his system was diabolical, and he often requested me the kindness of opposing his doctrine whenever I could; so that I never improvised a song, which had any reference to the human mind, in which I did not introduce some verses against Gall. Therefore, my ani-

mosity towards craniology had its origin in the organs of *veneration* and *conscientiousness*, for I was convinced that Father Andrez was a very clever and a very virtuous man. But when I perused the system of Gall, my obstinacy against him had other grounds. I had always spoken against him: my self-esteem was great, my marvellousness moderate, my combativeness great, and my firmness extraordinarily large. The combination of these organs, strengthened by the great veneration for my tutor, rendered my organs of conscientiousness and comparison of little use to me, and I opposed craniology without seeing the truth that was before my eyes. However, when Gall gave me the exact character of the Polish officer, I was almost convinced by conscientiousness, but my *self-esteem* and *combativeness* still were prominent, and I became indifferent, not a convert. The same has been the case with regard to my aversion to Spurzheim, and I may say, that for the last six years I was opposed to craniology only for the pleasure of displaying my abilities in discussion; and as I was much praised by those who heard my everlasting sophistical cavilling, the organ of *approbativeness*, which in my cranium is rather large, may have still procrastinated the avowal of my conversion to phrenology. However, this is only my opinion, and I should be very glad if Dr. Moore, who certainly must be well acquainted with the science, will examine my cast, compare it with my cranium, and discover a more reasonable explication of my long obstinacy and incredulity.

Who can examine my cast, and at the sight of my organs of *locality*, *individuality*, and *time*, will not discover in me an extraordinary power of memory, and of the memory which I have possessed of almost seeing the places, pages, and words, of which I was at any time speaking or writing? Who can feel my organ of *gaiety*, and not recognise the man who is almost always smiling, who in 1816 was found playing on the guitar the eve of the day appointed for his execution? Who can examine the organs of *ideality*, *comparison*, and *melody*, with the concomitant intellectual organs, and not easily see that I have been a poet? Who will not find my present condition in examining my organ of *benevolence*, and compare it with my almost unperceivable organ of *acquisitiveness*? In looking at my organ of *language*, accompanied by all the organs of the forehead, who can doubt that I am a linguist? It is a fact that I am continually speaking with and caressing all the children in the neighborhood of my cottage, and my organ of *philoprogenitiveness* corresponds exactly with this propensity. Who that has known me for some time cannot recognise in my cast the man *continually in despair*, and *in some scrape*, in seeing that my organs of *hope*, *secretiveness*, and *caution*, are almost unperceivable? With regard to my animal propensities, I shall say nothing else than *homo sum*, *humani nihil a*

me alienum puto, and as Horace asserts that "Nemo vitiis sine nascitur, optimus ille est qui minimis urgetur," I thank my Maker for having formed me of the middle class. Briefly; with my hand on my heart I here acknowledge that the organs of my cast answer exactly with my feelings and my propensities.

May this statement excite, in those who hear it, the desire of doing the same thing which I have done, and I have no doubt that many of them will then address similar letters to the members of the Phrenological Society.

Sir, Broussais was *ten years ago* a great adversary to phrenology; Demarait was the same; Le Blanc still worse; and now they are the principal members of the Phrenological Society of Paris. The epoch is fast approaching when those English Doctors who now glory in their opposition to phrenology, will appear before *you* as members of the same body, and concur with you in forwarding the general welfare of mankind by means of phrenology. — *The Lancet.*

Retention of Urine.

S. S., a sailor, ætat. 42, was admitted into the hospital on the 14th of June, under the care of Mr Scott, laboring under stricture of the urethra.

He stated that he had experienced difficulty in passing his urine for several years, and that occasionally, while the urine was flowing, it would suddenly stop, not a drop flowing for several minutes, until a quantity of viscid mucus had passed, when the urine would again flow. About fifteen years since, he contracted a very severe gonorrhœa, and had a gleety discharge from the urethra for several years, but this ultimately ceased, until about twelve months since, when he began to labor under this mucous discharge from the bladder, which filled him with anxiety, as he thought the discharge was the seminal fluid.

On his admission, Mr Scott attempted for some time to introduce the catheter, but without success. At length he succeeded, though with great difficulty, in passing No. 1, which was retained in the bladder by means of tapes. He was ordered to take an opiate, and on the following morning a dose of castor oil.

At the expiration of two days the catheter was removed, and immediately replaced by the next larger size, continuing every second day to increase the size, until at length the largest sized catheter could be introduced without difficulty.

On the 25th of July he complained much of the mucus with which his urine was loaded, for which he was ordered

Bals. copaivæ gtt. v;
Liq. potassæ gtt. x;
Tinct. hyoscyami gtt. xx *ter die sumend.*

He took this medicine until the 31st, when he complained of its causing "*a stoppage of the water*," there having been very little urine passed since he commenced taking this medicine,—but what urine does flow, is perfectly free from mucus. He was ordered to take only half the quantity, but this by mistake was not attended to.

On the 7th of August the urine was again loaded with mucus, when the dose of the copaiva was increased to ten drops.

16. Much the same as on the 7th; urine depositing a considerable quantity of mucus. To increase the dose of the copaiva to twenty drops.

23. Urine deposits less sediment. To take twenty-five drops of the copaiva for a dose.

On the 28th, Mr Scott finding the discharge of mucus still very considerable, determined on trying the effect of injecting the bladder with warm water. After doing this a few times, the urine was passed without the slightest appearance of mucus, nor has he had any return of this affection. We should have observed, that when the injection was tried, the copaiva and liq. potassæ were omitted, and the *decoct. cinchon. c. sodæ carb.* was taken instead.—*Lancet.*

Successful Employment of Transfusion.

Sir: Mrs D. ætat. 50, the mother of a large family, who had for many years been laboring under tubercular disease of the lungs, and latterly of the mesenteric glands had been very much affected. She had been several times so ill that she appeared to be almost dying, but by treatment she survived. I was called to her again July 31st, and found her excessively reduced from an attack of diarrhœa, and finding her sinking very fast, and all stimuli lost upon her, the pulse having left the wrist, the breathing being short and hurried, the countenance sunk, and every symptom of approaching dissolution, I determined, as the only shadow of chance, to try the effect of transfusion, an idea which I had for many years entertained. Accordingly, on the 2d of August, aided by my son and assistant, I carefully performed the operation. We found the pulse, which before was only a fluttering in the axilla, gradually return to a good beat at the wrist.—The countenance was relieved, and the next day she was much better and able to take food. On the 6th, I operated again on the right arm, since which she has constantly improved and been down stairs. I saw her to-day about her household concerns.—There was not the least inflammation of the veins, or any unpleasant symptom arising from the operation. I merely state the case as it has turned out, leaving it to others to judge of the

use that may be made of it; for my own part, under similar circumstances, I should not hesitate to perform it again, but of course it must be done with great care and delicacy, or the remedy may not be so successful. I am, Sir, your ob't serv't,

WM. JONES.

Lutterworth, Sept. 22, 1832.

ON DIFFICULTIES IN THE DIAGNOSIS BETWEEN INNOCENT AND MALIGNANT GROWTHS.

The distinction between *innocent* and *malignant* tumors, has not yet been clearly traced. Tumors which, in their regular progress, destroy life by the changes occurring in the affected part, are considered malignant. The occurrence of serious local and general symptoms, the development of new growths in other parts, and such constitutional suffering as leads to the suspicion that organs of consequence are involved in the affection, would generally be regarded as decided proofs of malignant character, and insuperable objections to an operation. Mr Abernethy has described a disease, exhibiting these alarming features, under the name of *tuberculated sarcoma*, which he seems to have chosen in consequence of the secondary growths consisting of small hard masses, or *tubercles*. He says that it "appears to possess a very malignant nature." A case has come under my observation, in which the original tumor had assumed all these threatening aspects, where, however, amputation was performed with complete success.

ON THE TREATMENT OF SEROUS CYSTS.

The essential differences that we observe in the structure of cysts, and their contents, would lead us to suppose that the same treatment cannot be applicable to all encysted tumors. The fibrous cysts must be either left alone, or completely removed by the knife. To irritate them by seton, injections, or incision and escharotics, is very dangerous. Measures of the latter kind, may be adopted without much risk in the serous cysts.

The introduction of the charpie seems to me objectionable in all cases of this kind, as likely to excite and keep up serious inflammation; the objects we have in view can be accomplished without it.

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I. — SUGGESTIONS RESPECTING THE FORMATION OF COUNTY ASSOCIATIONS FOR MEDICAL IMPROVEMENT.

IN reading your Magazine, Messrs Editors, I have occasionally noticed the proceedings of a society called the Boston Society for Medical Improvement. From recent inquiries I learn that this society is composed of a large portion of the practising physicians of the city, who meet together semi-monthly, for the purposes of giving an account of the diseases which come under their notice during the preceding fortnight; — of reading papers upon some medical topic — of discussing medical subjects, of exhibiting and examining specimens of morbid anatomy, &c. &c. The objects of this association are highly praiseworthy, and its results must be exceedingly interesting and important to the individuals concerned, and to the profession at large. The idea has occurred to me, that similar associations might be formed in different parts of the State, and be of great practical benefit to country practitioners. In consequence of residing at a distance from each other, physicians in the country do not have frequent opportunities of meeting together, as city practitioners have, to relate to each other their individual experience, and to express and compare opinions. The consequence is, that they are obliged to depend in almost all instances, upon their own judgment and experience in the treatment of diseases. There is hardly an individual among us, I presume, who has not occasionally met with cases of a

novel character either in medicine or surgery, and who would not have given much to have known the opinions and experience of his neighboring brethren in relation to them. Now if we in the country could meet together occasionally, as the physicians of your city do, for the consideration of medical subjects, we should be able to obtain many valuable hints which would be of great service to us in the managing of all new and difficult cases. There is probably no state in the Union in which the medical profession is more ably represented than in Massachusetts. The country, as well as the city, is filled with well educated and talented physicians and surgeons; and could they meet often together and compare opinions, they would be better known to each other, and the judgment and opinions of many of them would be more highly appreciated. I would suggest, then, to my country brethren the propriety of forming throughout the State, societies for medical improvement; that these societies should include every regularly educated physician of the State, whose duty should be to meet together at certain periods, say once a month, for the purposes; 1st, giving an account of the interesting cases of disease which might come under their observation during the preceding month; 2d, of exhibiting such specimens of morbid anatomy as they might obtain; 3d, of reading essays upon medical subjects; 4th, of expressing and interchanging opinions upon subjects previously proposed for discussion; 5th, of forming a medical circulating library, &c, &c. A multitude of important medical facts, and a vast amount of useful knowledge is lost to the profession, in consequence of being known only to individuals. Every physician in the course of his practice, meets with cases and becomes acquainted with facts, which from their peculiar character, are highly interesting, and which, if generally known to the profession, might be the means of illustrating many points in relation to the causes, the nature and treatment of diseases — of throwing light upon much that is still unknown concerning the changes which disease produce in the various structures of our bodies, and of establishing or overthrowing many medical theories and physiological doctrines. Now all these cases and facts which come under the observation of individual practitioners, and are known only to, and are generally soon forgotten by them, might, by means of associations like those proposed, be made known to many, and recorded in a book and preserved. The relation, by one member of the association, of a single case, would naturally bring to the recollection of his associates similar

cases that have occurred in their practice, and which perhaps they would have never thought of again, and thus much forgotten knowledge of great practical importance, might be revised and made subservient to the advancement of medical science. Besides, the practice of relating and describing cases before an assemblage of our fellow-practitioners, would have the effect of making us more particular in examining diseases, and in observing and noting the effect of remedies. It would likewise lead us to be more methodical in making our examinations and in recording their results, and would also induce us to prepare a medical case book in which to record our observations in some systematical order. It would moreover lead to the adoption by the society of a regular and a uniform nomenclature of diseases, the want of which will ever prevent the preparation of any work on the medical statistics of our State, which can be relied on as a work of reference. Were we all in the habit of keeping and of furnishing the society with a true record of the diseases which we might be called to treat, we should soon be in the possession of the means of ascertaining what disorders prevailed most among us; what influence the seasons, and atmospheric changes, and local situation, have in producing them; at what period of life they more frequently show themselves, what physical constitutions are oftenest subject to them, and what professions, and arts and trades, and physical agents generally, favor their production. But the history which we might give of a disease that proved fatal, would be necessarily imperfect and unsatisfactory unless it should be accompanied by a demonstration of the morbid changes produced by it.

Hence another leading object of the society should be the study of morbid anatomy. Prejudices against the making of post-mortem examinations do not exist now as formerly. The public mind has been much enlightened of late upon this subject; and there are, fortunately, but few in the community who, at the present day, seriously object to having the bodies of their deceased friends examined. The late act of our Legislature, legalizing the study of anatomy, has had a most happy influence in effecting this change; and every physician has now an opportunity of studying morbid anatomy, such as he has never before enjoyed. The importance of this study has not until late years, been sufficiently appreciated by us, and is not even yet. For a well-digested knowledge of morbid anatomy must be considered as the most, and I might say the only, sure guide to a right appreciation of symptoms, the principal means of forming

a correct diagnosis, and of enabling the practitioner to apply at the proper times the proper remedies. Symptoms are the results of morbid changes in organs. Unless, therefore, we have some correct notion of these changes as they take place, we cannot estimate properly the value of symptoms, or say what they decidedly indicate. Lænnec might have listened until the day of his death, to pectoral sounds, and still, unless he had been well versed in pathology, he would not have been able to have told us that a particular sound was a sure indication of a cavity in the lungs, — of inflammation of these organs, or of an effusion around them. The physician and the surgeon will ever be cautious and timid in giving an opinion of a case, until he is well informed of the progressive disorganization which disease produces in organs, and will be subject to frequent disappointments in the results of remedies which he may recommend. It is only, in short, by the comparison of symptoms with *post-mortem* appearances, as has justly been said, that practical medicine can rest on a sure basis, and approximate to the nature of an exact science. Having stated the symptoms of a disease, then, to the society, the reporter of a case should exhibit the diseased organs which gave rise to them, and explain the connection between the leasion and the symptoms. In this manner valuable information upon the most important branch of medical science would be easily obtained. Every member of the association would be equally benefited, and would attend to symptoms with increased interest in future. The descriptions of the diseased organs, and the symptoms which resulted from them, together with the comments of the demonstrator, *might* be recorded by the secretary, and thus in a few years, would be formed a book of knowledge of immense value to the association, and to the future pathologist.

The practice of exhibiting to the society specimens of diseased structure, would soon lead to the formation of a cabinet of morbid anatomy. Every physician would naturally be desirous of preserving for future examination and study, the various specimens which he might exhibit. These might be prepared for preservation at a moderate expenditure of the society's funds, and placed in its rooms for the use of the members; and whenever the different societies should have collected duplicate or more specimens of the same diseased organs, they might make exchanges, and in the course of time, each society would be in the possession of an extensive and valuable collection of morbid anatomy.

The reading of essays might form another highly interesting exercise of the society's meetings. Each member should in his turn be required to prepare and read a paper upon some professional subject. Every one would then have an opportunity of expressing at large his opinion upon any subject on which he might feel particularly interested. The different theories of the day might be discussed, and new ones proposed and defended, and in addition to the thousand subjects of practical bearing, others relating to the medical and statistical history of our towns might be chosen for the themes of these essays. These papers, many of which would be distinguished for originality, and contain new and interesting views upon subjects of practical importance, should be the property of the society, and deposited with the secretary. Selections from them might from time to time be made for publication, and given to the public through the medium of a medical journal. Such a disposal of them would bring the society into notice, and would cause its transactions to be considered and appreciated by the medical world. The reading of these essays might be followed by a colloquial discussion of the doctrines advanced in them, or of subjects previously proposed for discussion.

Another object of a society of Medical Improvement should be, the formation of a medical circulating library. The country practitioner has not the means of purchasing the various works on the subject of his profession, which he is in daily need of; and there is no institution near him from which he can obtain them. Nor can he afford to subscribe for medical periodicals, without which he cannot keep himself informed of the discoveries and improvements that are daily being made in medicine and surgery. But if the physicians of each county, for instance, would unite the libraries they do possess, and agree to contribute a small annual fee for the purchase of such works and periodicals of merit as are daily issuing from the press, libraries sufficiently extensive to meet the wants of every practitioner, might soon grow up in every county of our State. He would have within his reach the means of information which he now so much needs, and without which he cannot hope to assume that rank among his learned brethren which his talents entitle him to. It is seriously to be regretted that the profession of our State and of the country is not better supplied with medical libraries. I know not of a single medical library in the United States sufficiently extensive to meet the demands of the humblest cultivator of medical science; no one from which

materials could be obtained for a complete history, even of a single disease. The Massachusetts Medical Society has its library; and what does it amount to? It consists only of a hundred or two of books, some of which are indeed valuable, but it does not contain a series of works on any one subject, nor a single volume of recent date. It is indeed quite amusing to look at it, and contemplate its arrangement, or rather its disarrangement. Here we find a volume, an odd one, of Bell's Anatomy, supported on one side by Hunter on the Venereal and Hamilton on Purgatives, and on the other by a pamphlet on Spotted Fever — there perhaps lays flat on its side a ponderous folio, bearing upon its upper surface, Cullen's Synopsis — Waterhouse on Chicken Pox, and perhaps a dozen or two of unbound and half-stitched pamphlets upon various subjects; then comes an unoccupied dusty space of some feet, and as for a catalogue of the books, there is neither a printed or a *living* one that I have been able to find, which *will* direct me to the volume I may wish to obtain. Such is a true picture of the principal public medical library of New England. A larger and a more valuable one could be formed in a month by our county medical societies, if the members will but unite for the purpose. Besides a library, the proposed societies might purchase such anatomical plates and preparations, surgical and other instruments, chemical and philosophical apparatus, &c. as are too expensive for individuals to obtain; all of which might be kept in some central situation for the use of each member. The books could be taken from the library for a certain space of time, and the medical journals must, as soon as received, be handed to different individuals and transmitted from one to another, so that each in his turn should have an opportunity of reading them. Many other important objects might be effected by the formation of societies for medical improvement through the country, but these I will not allude to now. They will readily suggest themselves to every physician who is desirous of his own improvement, or that of the science which he professes to love. Until some means are adopted, similar to these now suggested, we shall never do much for our own reputation or that of the medical sciences. The physicians of this country, and particularly those situated in country towns, cannot expect to equal their European brethren in the knowledge of morbid anatomy, of surgery, &c. &c. &c., for they have not a Hôtel-Dieu, or a la-Cherité, or a Guy's Hospital at their service; but there is no reason why we should not compete with them in the

cultivation of other branches of medical science. We have as many hours in the day to labor in as they have, and we have the organ of self-approbation too strongly developed to acknowledge that our heads are not as well formed as theirs are. Why should we not as well as a Magendie or a Dutrochet, engage in the study of animal and vegetable physiology, and accomplish as much as they have in these sciences? Nature has been as bountiful to us as to them in furnishing subjects for experiments and observation. Why should we not, as well as a Tiedemann and Gmelin, undertake a course of experiments on digestion, and give to the world a work as original and as valuable as they have given? We have as many animal and chemical agents and instruments at our command as they had. We have hens, and geese, and ducks, and they lay eggs. We have an abundance of fishes and frogs, of rabbits and guinea pigs, and the same means for investigating the laws of animal life, as the physicians of Europe have; and yet we permit them to make all the discoveries, and seem perfectly satisfied with the privilege of eating the eggs, and fishes, and rabbits, and pigs, and of watching the motions and hearkening to the sounds of the frogs.

It is a fact, and a humiliating one, that the profession in this country has done but little for the advancement of medical science, and so long as we keep aloof from each other, we shall do nothing. But if we will but agree to unite together for mutual improvement, we may, I am sure, in the course of time accomplish something worthy of ourselves, and of the profession of which we are members. The members of the Massachusetts Medical Society will soon hold their annual meeting. Physicians from the various parts of the State will be present. May we not hope that some steps may then be taken by them to form, without delay, societies for medical improvement.

NORFOLK.

Art. II.—Medical Statistics and Bills of Mortality, for Boston, during nineteen years ending January 1st, 1832.

By D. Humphreys Storer, M. D.

Continued from page 526.

TABLE X.

Summary of the deaths in Boston, during the month of *April*, in a series of 7 years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	10	2	4	2	4	1	1	2	0	0	3	3	10	6	4	3	1	4	1	6	0	0	0	0	1	1	69
1814	6	3	2	0	2	5	0	0	3	0	5	5	5	3	2	3	2	2	3	0	1	3	0	1	0	0	56
1815	9	8	2	1	5	2	0	2	0	1	4	3	3	2	3	1	1	2	2	1	2	4	1	1	0	0	60
1816	7	15	2	3	2	6	1	0	1	2	4	12	9	5	6	2	4	0	2	1	1	1	0	1	0	0	87
1817	5	6	2	4	3	5	1	3	0	1	1	2	5	6	7	2	2	3	2	3	1	1	0	0	0	2	67
1818	8	10	2	4	3	2	0	0	1	1	0	1	7	7	7	5	3	4	4	4	4	1	0	0	1	0	79
1819	6	1	4	1	1	2	1	2	1	4	8	2	7	1	2	1	1	1	0	1	1	0	1	1	0	0	50
	51	45	18	15	20	23	4	9	6	9	25	28	46	30	31	17	14	16	14	16	10	10	2	4	2	3	468
Totals,	96		33		43		13		15		53		76		48		30		30		20		6		5		468

TABLE XI.

Summary of the deaths in Boston for the month of *April*, in a series of 12 years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 5		50 to 60		60 to 70		70 to 80		0 to 90		90 to 10.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	3	3	1	3	0	1	1	2	3	5	4	3	4	3	5	2	4	1	1	2	2	4	0	0	0	0	57
1821	6	6	2	5	1	1	1	2	2	0	7	4	8	6	6	5	4	3	3	1	1	1	3	1	0	0	79
1822	6	4	3	3	3	2	0	0	0	4	10	4	7	2	10	2	5	1	1	9	1	0	0	0	0	0	77
1823	11	7	6	1	0	1	3	2	2	1	5	8	6	3	1	4	0	5	4	0	2	2	0	1	0	0	75
1824	7	4	1	3	1	2	2	2	1	3	8	8	7	7	6	2	6	2	2	2	2	1	1	0	0	0	80
1825	8	4	13	6	6	5	1	1	0	2	6	6	3	7	8	7	1	3	2	2	1	0	1	1	0	0	94
1826	6	8	8	5	1	6	4	2	1	1	6	2	7	9	4	4	0	4	4	2	1	4	1	1	0	0	91
1827	9	9	2	0	4	4	2	0	1	0	1	3	10	4	2	3	6	2	2	2	1	3	1	2	1	0	74
1828	11	8	4	5	5	7	2	5	2	3	8	8	8	4	3	4	0	1	3	1	1	3	0	2	0	0	98
1829	9	2	3	3	3	2	2	6	2	4	5	12	6	9	4	6	1	0	3	3	2	4	0	2	0	0	93
1830	9	5	4	3	4	4	4	0	1	1	6	6	7	3	6	3	5	5	4	3	3	0	3	2	0	0	91
1831	8	9	4	4	1	4	1	2	2	4	9	11	4	3	3	3	4	3	3	3	2	1	1	0	1	0	90
	93	69	51	41	29	39	23	24	17	28	75	75	77	60	58	45	36	30	32	30	19	23	11	12	2		999
Totals.	162		92		68		47		45		150		137		103		66		62		42		23		2		999

TABLE XII.

Summary of deaths for *May*, during a series of seven years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 5.		50 to 6		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	7	0	1	2	5	1	0	0	0	3	8	2	7	9	8	2	2	2	3	2	1	0	1	2	0	0	68
1814	6	3	2	2	2	1	1	0	0	2	4	3	2	1	1	3	4	3	0	0	1	0	3	0	0	0	44
1815	3	5	2	1	1	1	1	5	2	1	3	5	3	3	4	1	3	0	1	2	0	1	0	2	0	0	50
1816	7	4	0	0	2	1	1	2	1	5	11	4	4	3	9	1	3	4	3	4	1	1	0	1	0	0	72
1817	3	2	2	2	3	0	3	1	0	5	3	6	6	7	4	3	1	0	1	1	4	0	1	4	0	0	62
1818	6	5	3	2	4	0	4	2	1	4	8	3	3	7	3	1	5	1	2	4	3	4	2	1	0	0	78
1819	5	3	3	2	2	0	2	4	2	3	6	6	2	3	4	2	2	1	2	0	1	1	0	0	0	0	56
	37	22	13	11	19	4	12	14	6	23	43	29	27	33	33	13	20	11	12	13	11	7	7	10			430
Totals	59		24		23		26		29		72		60		46		31		25		18		17				430

TABLE XIII.

Summary of the deaths in Boston, during the month of *May*, in a series of twelve years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	3	4	1	0	1	4	1	0	1	5	4	5	5	5	1	2	4	5	2	1	1	2	0	2	0	0	59
1821	6	3	4	4	10	3	2	0	2	4	8	8	3	7	2	6	5	3	1	1	0	5	0	1	0	0	88
1822	4	1	2	1	1	0	1	1	2	1	7	4	6	5	9	0	3	4	1	2	2	3	0	2	0	0	62
1823	11	2	2	2	2	0	2	1	3	4	2	8	11	3	5	6	6	1	2	4	2	1	0	1	0	0	81
1824	3	4	2	1	1	6	0	0	3	3	1	3	5	5	9	5	1	2	3	1	1	4	2	1	0	0	66
1825	8	5	9	12	10	8	2	3	0	3	7	7	5	1	11	1	4	4	0	2	1	1	0	0	0	1	105
1826	11	9	4	7	6	5	3	2	1	2	8	6	8	7	7	2	6	3	2	4	2	0	0	1	0	0	106
1827	5	3	3	2	3	1	2	2	3	1	8	4	8	7	4	4	3	5	2	0	2	2	0	2	0	0	76
1828	14	10	2	3	2	1	2	1	2	7	9	3	7	6	5	5	8	2	1	1	2	2	1	0	0	0	96
1829	8	7	1	6	4	1	0	1	3	2	5	11	14	4	6	9	2	0	2	1	1	0	2	0	1	1	92
1830	8	1	1	5	3	2	1	3	2	4	7	6	7	4	2	7	2	1	3	2	3	1	0	0	0	0	75
1831	5	6	2	2	5	1	0	1	1	4	1	5	5	6	5	5	2	3	2	3	5	1	0	1	0	1	72
	86	55	33	45	48	32	16	15	23	40	67	70	84	60	66	52	46	33	21	22	22	22	5	11	1	3	978
Totals.	141		78		80		31		63		137		144		118		79		43		44		16		4		978

TABLE XIV.

Summary of the deaths in Boston for the month of *June*, in a series of seven years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		0 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	11	0	5	1	3	0	0	1	2	1	3	5	6	2	4	2	3	2	1	3	3	2	0	0	0	0	60
1814	6	1	2	1	2	1	1	0	1	3	4	3	4	1	6	0	1	1	1	0	0	2	0	0	0	0	41
1815	5	3	2	3	1	1	2	1	4	3	3	5	4	2	2	1	3	2	1	2	0	1	0	1	0	0	52
1816	5	3	0	1	1	0	0	0	1	2	5	6	14	5	0	2	2	1	1	1	0	2	0	1	0	0	53
1817	4	4	3	3	4	2	1	0	1	2	4	2	4	4	1	7	3	0	3	5	1	1	1	0	0	0	60
1818	5	6	4	6	2	1	3	2	1	2	5	4	5	6	6	4	5	5	4	1	2	2	0	2	0	0	83
1819	6	0	2	0	1	0	0	6	1	1	1	4	3	2	4	2	2	0	0	3	1	0	0	0	0	0	39
	42	17	18	15	14	5	7	10	11	14	25	29	40	22	23	18	19	11	11	15	7	10	1	4			388
Totals.	59		33		19		17		25		54		62		41		30		26		17		5				388

TABLE XV.

Deaths in Boston in the month of *June*, in a series of twelve years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	7	1	3	0	1	2	1	2	1	3	2	9	4	2	2	3	4	0	2	4	0	0	3	2	0	0	58
1821	8	10	6	8	13	9	8	2	1	1	3	2	2	2	1	2	2	5	2	2	2	0	0	0	0	0	91
1822	3	3	2	0	2	1	2	2	1	2	3	6	7	6	7	1	5	3	1	2	1	1	1	1	0	0	63
1823	5	3	0	0	1	1	3	0	0	1	2	5	3	3	6	6	3	1	1	0	3	1	1	1	0	0	50
1824	2	5	2	0	4	3	2	1	2	3	3	2	6	5	3	2	4	3	0	2	2	1	1	0	0	0	58
1825	11	9	7	7	8	4	1	0	2	2	2	1	4	7	1	0	5	3	1	1	2	3	1	0	0	0	82
1826	14	3	5	1	5	2	2	3	4	4	3	5	10	5	6	5	3	1	2	2	2	0	1	0	0	0	88
1827	7	1	5	2	0	3	1	1	1	1	5	6	7	3	4	2	8	1	0	0	1	1	0	1	0	0	61
1828	8	4	4	3	2	3	4	3	1	3	7	6	7	7	4	4	0	3	5	3	2	0	1	0	0	0	84
1829	6	2	0	6	7	2	1	0	4	3	6	2	4	8	1	3	4	1	3	2	2	3	0	2	0	0	72
1830	6	5	0	6	1	0	4	2	2	2	4	2	2	3	0	2	2	3	1	2	1	1	1	1	0	0	53
1831	10	9	5	3	5	4	1	5	0	7	3	4	4	5	5	1	1	3	3	3	0	1	1	3	0	0	86
	87	55	39	36	49	34	30	21	19	32	43	50	60	56	40	31	41	27	21	23	18	12	11	11			846
Totals.	142		75		83		51		51		93		116		71		68		44		30		22				846

TABLE XVI.

Summary for *July*, in a series of seven years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	13	2	3	1	0	1	0	2	3	3	6	5	1	4	5	1	2	1	1	3	1	0	1	0	0	0	59
1814	9	6	5	1	0	0	4	0	3	0	7	5	4	7	6	1	1	1	1	0	0	2	0	0	0	0	63
1815	9	6	5	3	0	2	3	0	0	3	5	4	7	0	3	0	1	1	0	5	0	1	0	1	0	0	59
1816	4	3	1	4	4	0	3	1	3	4	5	3	3	4	5	1	3	2	2	2	0	3	0	1	0	0	61
1817	7	7	4	2	3	0	1	1	2	3	3	2	6	5	6	4	2	0	2	2	2	0	0	0	0	0	64
1818	7	5	3	4	2	0	0	2	4	3	5	3	4	5	4	5	5	2	2	3	2	3	1	0	1	0	75
1819	4	4	2	1	1	1	6	2	4	0	4	5	2	0	6	3	1	1	2	2	0	1	0	0	0	0	52
	53	33	23	16	10	4	17	8	19	16	35	27	27	25	35	15	15	8	10	17	5	10	2	2	1	0	433
Totals.	86		39		14		25		35		62		52		50		23		27		15		4		1		433

TABLE XVII.

Deaths in Boston for the month of *July*, in a series of twelve years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	3	3	3	1	3	0	1	2	5	2	5	1	7	3	8	4	3	1	3	2	1	1	0	1	0	0	63
1821	11	5	17	19	9	7	1	1	3	0	5	2	7	5	3	4	6	2	1	1	2	0	0	0	0	1	112
1822	2	6	1	1	1	1	1	2	3	1	2	6	6	5	3	5	7	1	2	2	1	3	0	1	0	0	63
1823	7	4	0	1	0	0	0	2	2	2	5	5	5	1	8	6	2	0	0	2	1	0	0	1	1	0	55
1824	4	6	3	4	1	0	2	0	3	3	10	2	3	11	6	2	3	4	1	5	0	1	0	0	0	1	75
1825	22	20	7	11	1	4	3	2	1	5	10	8	12	8	9	7	3	7	1	2	0	4	0	0	0	0	147
1826	10	11	2	4	3	1	1	0	3	2	8	5	10	8	9	3	1	2	1	2	4	1	1	1	0	1	94
1827	5	5	5	4	3	2	1	0	3	2	4	13	6	7	4	9	5	1	4	2	2	1	1	2	0	0	81
1828	11	4	3	3	1	1	1	0	2	2	7	11	8	9	2	3	2	3	0	3	2	3	2	0	0	0	83
1829	6	5	10	1	2	4	5	0	3	3	12	8	11	3	3	6	2	3	2	3	0	1	0	0	0	0	93
1830	11	3	2	4	2	4	1	2	4	2	4	5	8	6	7	2	2	2	1	3	1	2	0	1	0	1	80
1831	8	6	0	6	4	3	2	4	3	5	10	7	7	4	6	4	4	4	2	4	1	0	0	1	1	0	96
	100	78	53	59	30	27	19	15	35	29	82	63	90	70	68	55	40	30	18	31	15	17	4	8	2	4	1042
Totals	178		112		57		34		64		145		160		123		70		49		32		12		6		1042

TABLE XVIII.

Summary of the deaths in Boston for the month of *August*, during a series of seven years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	7	4	3	1	2	1	0	0	1	0	5	3	0	1	4	2	4	1	2	2	0	2	0	1	0	0	46
1814	13	11	4	7	2	5	1	0	1	1	4	7	3	4	3	2	0	0	3	3	0	4	1	0	0	0	79
1815	13	10	6	8	4	0	2	1	1	0	8	6	4	5	3	3	0	1	0	2	1	3	1	1	0	0	83
1816	7	8	6	0	0	2	1	3	1	0	8	9	1	3	1	2	2	4	0	2	2	1	1	0	0	0	64
1817	13	19	17	12	3	1	3	1	4	1	3	3	3	4	16	12	13	12	3	2	2	1	2	1	0	0	151
1818	8	9	2	2	5	2	1	1	5	0	7	4	4	6	6	3	3	2	2	2	1	1	0	1	0	0	77
1819	7	6	6	7	2	0	1	2	2	4	6	13	7	5	4	3	4	4	0	6	2	3	0	0	0	0	94
	68	67	44	37	18	11	9	8	15	6	41	45	22	28	37	27	26	24	10	19	8	15	5	4			594
Totals.	135		81		29		17		21		86		50		64		50		29		23		9				594

TABLE XIX.

Deaths in the month of *August*, in a series of twelve years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	13	11	5	8	2	4	4	1	1	1	7	2	5	5	6	4	6	2	0	2	1	1	0	2	0	0	93
1821	11	8	18	17	7	6	6	1	0	3	7	8	7	5	4	4	0	3	1	3	3	2	0	3	0	0	127
1822	7	4	7	6	5	5	2	2	2	3	6	3	4	4	6	4	4	0	2	6	2	3	1	1	0	0	89
1823	8	11	3	3	2	1	2	2	0	4	6	5	0	5	3	5	1	3	2	1	1	2	0	2	0	0	72
1824	11	12	6	7	3	4	3	2	3	0	5	6	8	3	3	5	8	2	4	2	2	3	0	3	0	0	105
1825	21	21	10	16	7	8	4	2	2	2	5	5	7	2	7	5	2	3	0	2	0	0	0	2	0	0	133
1826	16	13	13	12	2	3	3	3	2	2	8	10	7	0	10	3	3	4	0	4	1	3	1	2	0	0	125
1827	13	11	4	10	3	1	3	3	3	4	3	5	5	7	3	3	7	1	3	1	1	2	4	0	0	0	100
1828	20	12	9	6	1	1	2	0	2	2	13	7	5	10	9	4	2	4	2	4	2	3	0	0	0	0	120
1829	14	5	3	12	2	5	2	0	0	4	7	7	7	6	3	4	2	2	2	4	0	1	2	0	0	0	94
1830	12	11	2	6	2	4	2	2	3	1	5	8	7	1	3	1	4	(	1	4	1	1	1	0	0	0	82
1831	16	14	9	13	7	7	2	1	1	2	7	6	9	4	6	4	2	2	6	1	2	1	0	0	0	0	122
	162	133	89	116	43	49	35	19	19	28	79	72	71	52	63	46	41	26	23	34	16	22	9	15			
Totals.	295		205		92		54		47		151		123		109		67		57		38		24				1262

TABLE XX.

Summary of deaths for *September*, during a series of seven years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	15	8	10	9	4	4	0	0	1	0	3	0	3	2	3	1	2	0	2	3	2	3	1	0	0	1	77
1814	12	7	4	4	1	1	0	0	1	1	5	5	3	0	1	0	0	1	0	1	0	2	1	0	0	1	51
1815	13	7	8	9	3	5	1	5	4	3	6	6	7	4	5	2	2	2	2	5	1	2	0	1	0	0	103
1816	4	2	2	8	5	1	0	2	2	0	7	10	6	5	5	3	1	0	1	4	0	1	0	4	0	1	74
1817	13	13	13	9	3	4	2	0	1	1	3	2	1	2	5	4	4	1	2	1	4	7	3	0	0	0	98
1818	6	9	9	7	3	4	2	2	3	1	4	5	6	4	3	2	5	4	3	4	3	1	0	0	0	0	90
1819	13	7	17	9	3	3	1	0	1	6	8	7	7	4	4	4	2	1	2	5	4	3	0	2	0	0	113
	76	53	63	55	22	22	6	9	13	12	36	35	33	21	26	16	16	9	12	23	14	19	5	7	0	3	606
Totals.	129		118		44		15		25		71		54		42		25		35		33		12		3		606

TABLE XXI.

Deaths in the month of *September*, in a series of twelve years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	9	2	14	15	1	2	0	3	2	2	5	0	5	3	3	4	4	1	2	4	1	3	1	1	0	1	88
1821	19	16	19	11	10	2	1	2	1	3	7	7	5	4	6	4	2	5	2	4	1	1	1	0	0	0	133
1822	17	17	14	9	1	3	4	3	0	1	3	8	6	4	4	4	1	4	0	2	1	1	0	1	0	0	108
1823	11	8	15	12	2	3	4	2	8	3	3	3	2	8	8	4	1	2	2	4	0	2	2	1	0	0	110
1824	19	13	12	19	3	2	1	3	2	4	7	5	10	7	10	3	2	1	1	3	1	3	0	2	00	0	133
1825	12	11	15	10	5	5	0	3	4	3	7	5	12	8	4	1	4	0	1	4	2	2	1	1	0	0	120
1826	20	13	4	12	5	2	3	2	2	3	7	5	8	4	7	4	3	3	1	2	3	2	0	0	0	0	115
1827	14	12	3	9	1	2	1	0	2	2	4	8	2	8	8	3	1	4	3	0	0	2	1	1	0	0	91
1828	14	20	11	8	5	5	1	2	4	2	13	9	12	4	4	4	10	4	2	5	1	1	1	0	0	0	142
1829	22	13	13	15	5	5	2	3	2	7	6	4	5	4	3	3	2	1	2	0	2	0	1	0	0	0	120
1830	17	5	6	7	6	6	1	1	1	1	9	5	5	7	7	4	1	2	2	1	0	1	0	0		0	95
1831	18	10	6	10	8	3	5	1	1	3	8	5	10	6	5	5	2	2	4	2	4	2	2	0	0	1	123
	192	140	132	137	52	40	23	25	29	34	79	64	82	67	69	43	33	29	22	31	16	20	10	7	0	2	
Totals.	332		269		92		48		63		143		149		112		62		53		36		17		2		1378

TABLE XXII.

Summary of the deaths in Boston, in the month of *October* in a series of 7 years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	8	7	9	12	1	0	3	0	3	1	3	5	2	5	1	4	2	4	2	1	1	2	1	0	0	0	77
1814	14	4	12	5	6	4	2	1	0	4	4	6	7	8	4	4	0	6	1	4	1	2	1	0	0	0	100
1815	15	4	8	6	2	2	2	1	4	2	9	4	8	7	3	3	6	2	4	8	3	2	1	8	0	0	114
1816	7	7	4	0	2	3	1	0	5	1	4	7	3	4	7	1	4	3	1	3	0	1	0	2	0	0	70
1817	8	10	10	16	4	5	3	1	1	4	1	5	2	3	4	6	1	2	3	4	3	2	1	0	0	0	99
1818	8	8	5	4	4	2	2	3	2	1	6	10	8	4	5	5	4	4	6	5	3	3	2	0	0	0	104
1819	9	6	8	4	4	2	1	4	4	3	5	1	3	4	3	5	2	7	0	0	2	1	2	3	0	0	83
	69	46	56	47	23	18	14	10	19	16	32	38	33	35	27	28	19	28	17	25	13	13	8	13			647
Totals,	115		103		41		24		35		70		68		55		47		42		26		21				647

TABLE XXIII.

Deaths in *October*, in a series of 12 years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	8	9	5	6	4	6	1	1	3	7	8	8	6	4	8	1	3	6	1	2	3	3	0	1	0	0	104
1821	7	13	13	10	4	4	2	2	3	2	5	5	3	9	4	3	4	3	1	4	0	1	0	2	0	0	104
1822	9	11	8	6	5	2	3	2	1	3	8	4	8	4	9	7	2	2	2	2	1	1	2	3	1	0	106
1823	9	4	15	9	5	8	3	2	1	4	8	9	4	7	4	7	5	3	2	5	2	3	1	0	0	0	120
1824	12	11	10	9	5	5	1	1	0	5	6	9	8	7	1	5	5	1	1	2	1	1	0	2	0	1	109
1825	20	5	5	4	4	4	5	1	1	5	8	8	8	7	4	3	3	1	1	4	3	1	1	1	0	0	107
1826	11	6	4	5	2	1	5	1	0	3	5	14	7	5	6	7	4	2	7	4	1	5	0	0	1	0	106
1827	6	10	1	2	1	0	0	2	1	3	7	5	0	4	10	4	1	3	5	1	1	1	0	1	0	0	69
1828	10	11	10	7	1	0	1	0	2	3	13	6	9	6	8	4	5	2	1	1	0	2	0	1	0	0	103
1829	8	10	12	10	8	7	4	0	0	6	5	5	6	6	3	2	1	3	2	1	1	3	0	1	0	1	105
1830	10	9	8	9	7	4	1	0	2	2	7	12	10	6	7	5	3	1	4	1	0	0	0	2	0	0	110
1831	11	11	5	9	8	6	5	5	0	3	9	7	9	11	6	7	6	5	2	2	1	2	0	1	1	0	132
	121	110	96	86	54	47	31	17	14	46	89	92	78	76	70	55	42	32	29	29	14	23	4	15	3	2	1275
Totals.	231		182		101		48		60		181		154		125		74		58		37		19		5		1275

TABLE XXIV.

Summary of the deaths in Boston, for the month of *November*, in a series of seven years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	10	2	5	1	0	2	2	0	0	1	4	3	5	3	4	0	2	3	0	0	3	2	0	0	0	0	52
1814	2	3	2	2	6	3	0	1	4	0	8	11	4	5	3	0	1	0	2	2	2	4	1	0	0	0	66
1815	6	3	5	1	2	1	1	0	4	0	2	6	7	3	3	4	6	1	5	3	1	7	0	5	0	0	76
1816	6	9	3	3	1	3	1	1	1	1	1	5	1	2	4	3	1	4	1	2	2	3	1	0	0	1	60
1817	3	3	8	5	2	0	1	1	0	1	5	1	5	3	1	2	0	0	2	0	2	0	2	2	0	1	50
1818	3	4	8	5	2	3	3	1	3	3	7	7	5	2	4	5	4	4	3	4	1	3	2	3	0	0	89
1819	3	4	4	7	6	2	0	3	1	1	4	3	10	3	3	2	2	3	2	1	0	2	0	0	0	0	66
	33	28	35	24	19	14	8	7	13	7	31	36	37	21	22	16	16	15	15	12	11	21	6	10	0	2	459
Totals	61		59		33		15		20		67		58		38		31		27		32		16		2		459

TABLE XXV.

Deaths in the month of *November*, in a series of twelve years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1820	9	7	2	6	4	5	1	1	0	2	8	10	5	2	2	5	2	2	3	1	0	3	1	0	0	0	81
1821	6	3	3	9	7	3	2	2	3	1	0	12	10	9	3	6	1	3	1	1	5	5	0	1	0	0	96
1822	15	5	8	8	4	0	2	4	1	2	5	5	6	1	7	2	4	6	1	2	2	2	1	1	0	0	94
1823	11	7	2	7	0	1	1	1	3	2	3	7	7	6	3	7	4	2	1	1	1	3	2	2	0	0	84
1824	16	13	8	3	5	5	3	1	3	3	7	2	4	1	3	7	0	8	3	3	2	4	1	1	0	0	106
1825	3	8	1	7	4	2	1	3	1	3	7	4	11	7	6	4	1	2	3	3	4	5	1	2	0	1	94
1826	6	2	7	8	2	4	0	0	2	1	5	5	9	7	6	3	4	5	2	0	2	2	0	0	1	0	83
1827	4	6	2	3	5	0	3	1	2	2	9	3	7	7	6	5	3	1	1	2	3	1	1	1	0	0	78
1828	6	10	4	1	1	4	4	1	1	3	5	4	7	9	5	4	3	2	3	1	1	3	2	1	0	0	85
1829	5	11	6	6	11	8	2	2	4	1	6	4	2	9	4	5	1	1	3	2	1	2	0	2	0	1	99
1830	3	5	0	8	5	2	1	0	3	5	3	4	1	4	4	4	2	3	2	3	1	1	1	0	0	0	65
1831	9	10	9	8	7	15	5	6	2	3	14	5	8	6	5	1	4	3	1	3	3	2	2	1	0	0	132
	93	87	52	74	55	49	25	22	25	28	72	65	77	68	54	53	29	38	24	22	25	33	12	12	1	2	1097
Totals.	180		126		104		47		53		137		145		107		67		46		58		24		3		1097

TABLE XXVI.

Summary of the deaths in Boston in the month of *December*, for a series of seven years.

	Under 1 year.		1 to 2		2 to 5		5 to 10		10 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1813	13	5	5	1	1	1	2	3	0	3	2	2	4	3	8	0	1	4	4	4	3	3	1	1	0	0	74
1814	4	4	2	1	0	2	2	2	2	0	2	4	6	6	0	2	2	0	0	0	1	2	0	4	0	0	48
1815	4	6	3	1	3	5	1	0	1	2	5	5	6	11	5	5	4	5	0	3	1	8	0	0	0	0	84
1816	7	7	3	3	2	4	3	1	3	0	5	4	8	3	8	4	2	4	2	6	4	5	2	1	0	0	91
1817	3	3	1	4	1	0	1	1	1	2	4	2	4	1	3	5	1	1	0	2	2	2	1	1	0	0	47
1818	7	9	3	3	3	3	1	5	3	0	6	5	3	5	5	3	2	2	3	3	1	0	0	1	0	0	76
1819	3	4	4	7	6	2	0	3	1	1	4	3	10	3	3	2	2	3	2	1	0	2	0	0	0	0	66
	41	38	21	20	16	17	10	15	11	8	28	25	41	32	32	21	14	19	11	19	12	22	4	8			496
Totals.	79		41		33		25		19		53		73		53		33		30		34		12				496

TABLE XXVII.

Deaths in the city of Boston in *December*, for a series of twelve years.

	Under 1 y'r.		1 to 2		2 to 5		5 to 10		0 to 20		20 to 30		30 to 40		40 to 50		50 to 60		60 to 70		70 to 80		80 to 90		90 to 100		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	
1820	3	7	2	3	5	6	2	9	0	4	8	12	5	4	5	3	0	3	2	2	0	2	1	1	0	0	89
1821	8	4	2	9	0	6	4	2	0	3	6	8	3	10	10	2	2	3	3	1	1	2	2	1	0	1	93
1822	11	7	5	2	2	3	3	3	3	4	6	7	3	4	4	6	4	4	3	3	2	3	1	2	0	0	95
1823	8	6	1	1	2	1	0	2	0	2	6	6	2	3	6	3	4	3	2	1	1	3	0	1	1	0	65
1824	13	8	4	8	11	4	6	1	1	1	4	10	4	5	5	4	3	7	4	3	3	2	1	0	0	1	113
1825	12	6	3	3	3	1	5	2	3	2	6	7	4	7	5	7	5	9	2	2	1	4	1	1	1	1	103
1826	9	5	1	2	3	3	0	0	3	3	2	3	9	6	3	4	4	1	0	3	1	0	1	2	0	0	68
1827	4	6	3	3	4	1	0	1	3	2	5	4	5	6	3	4	4	2	3	3	0	5	0	0	1	1	73
1828	6	3	2	3	4	4	2	1	2	5	4	13	3	5	5	2	5	3	1	3	2	1	1	4	0	1	85
1829	11	5	4	8	5	5	1	3	2	1	11	5	4	4	2	1	5	2	2	0	1	6	1	1	0	0	90
1830	6	6	3	3	5	5	1	0	1	4	7	5	9	1	4	3	2	8	1	2	1	3	0	2	0	0	82
1831	29	15	11	12	13	12	3	7	2	5	12	10	16	8	10	6	10	11	5	10	2	10	0	3	1	1	224
	120	78	41	57	57	51	27	31	20	36	77	90	67	63	62	45	48	56	28	33	15	41	9	18	4	6	1180
Totals	198		98		108		58		56		167		130		107		104		61		56		27		10		1180

TABLE XXVIII.

This table shows the ages at which the deaths in Boston have occurred in each year of a series of 12 years, viz. from 1st of Jan. 1820, to 1st of Jan. 1832. Commencing with the deaths which have taken place during the first year of life, and ending with those between 90 and 100. No death having occurred over that age, during this period. The whole time is divided into thirteen periods — the mortality at each of which, in proportion to the whole amount, with the ages, designated, is as follows.

Under 1 year			as	1	in	5.8
Between 1	and	2	"	1	"	9.5
2	"	5	"	1	"	11.4
5	"	10	"	1	"	27.6
10	"	20	"	1	"	21.2
20	"	30	"	1	"	8.1
30	"	40	"	1	"	8.3
40	"	50	"	1	"	10.6
50	"	60	"	1	"	15.6
60	"	70	"	1	"	21.9
70	"	80	"	1	"	26.6
80	"	90	"	1	"	50.
90	"	100	"	1	"	265.4

Dividing the sum of the ages at which the deaths occurred, by the whole number of the deceased, we have 27.5 years as the mean duration.

Note. — I had intended to have prefaced this paper with an account of the Topography of Boston, but having prepared it particularly for the members of the profession in this city, feared that such an attempt might be considered superfluous

In order that some data may be afforded by which to judge of the population of the city at different periods, and to determine the ratio of increase, I would add the following table.

The number of inhabitants in Boston

in	1765	was	15,520	in	1810	was	33,250
"	1790	"	18,038	"	1820	"	43,298
"	1800	"	24,937	"	1830	"	61,392

TABLE XXIX.

This Table shows the proportion of deaths in Boston, by each of the most frequent diseases to the whole number of deaths: estimated from a series of 19 years, forming a scale of mortality.

Order of mortality.	Diseases.	Whole No. of deaths.	Being to the whole amount of deaths as one in	Whole number of deaths from diseases of a similar class.	Proportion of deaths from diseases of a similar class to the whole number of deaths as 1 in
1st.	Consumption.	3709	5.3		
2d.	Inflammations, viz.			1598	8.11
	Of Lungs and Chest,	1096	17.9		
	" Stomach and bowels,	191	10.2		
	" Brain,	165	13.8		
	" Liver,	89	221·3		
	" Erysipelatous,	15	1313.5		
	" Heart,	10	1970.		
	" Bladder and Kidneys,	4	4925.		
	" Spleen,	2	9850.		
	Neither organ nor type named.	26	757.7		
3d.	Fevers — viz.			1438	
	Typhus,	935	21.		
	Bilious,	137	144.		
	Scarlet,	134	147.		
	Inflammatory, Putrid, — Intermittent, — Spotted, and others whose types are not named.	232	84.9		
4th.	Bowel Complaints, — viz.			954	29.6
	Dysentery,	468	42.1		
	Cholera,	227	86 5		
	Diarrhœa,	70	28.1		
	Dyspepsia,	87	226 4		
	Cholic,	28	703.6		
	Other Bowel Affections.	74	266.2		
5th.	Dropsies — viz.			843	23.4
	Of the Brain	366	53.8		
	" " Chest,	56	351.8		
	Organs not named.	421	468		
6th.	Old Age,	805	24.4		
7th.	Convulsions.	450	43.8		
8th.	Casualties — Drowned,	299	65.9	400	
	Other Casualties.	101	195		
9th.	Drunkenness.	356	55.3		

TABLE XXIX. — CONTINUED.

Order of mortality.	Diseases.	Whole number of deaths.	Being to the whole amount of deaths as as 1 in
01th.	Measles,	346	36.9
11th.	Croup,	381	51.7
12th.	Hooping Cough,	274	72
13th.	Apoplexy,	199	99
14th.	Sudden,	188	105
15th.	Palsy,	186	106
16th.	Parturition and Childbed,	179	110
17th.	Aphthæ,	145	135.2
18th.	Mortification,	131	150.4
19th.	Burns and Scalds,	130	151.5
20th.	Quincy,	112	176
21st.	Debility and Decay,	109	180.8
22d.	Teething,	106	185.8
23d.	Cancer and Schirrhus,	103	191.2
24th.	Suicide,	90	218.8
25th.	Atropy and Merasmus,	63	312.7
26th.	Rheumatism,	59	334
27th.	Abscess,	50	394
28th.	Scrofula,	48	410.4
29th.	Insanity,	44	448
30th.	Hemorrhage of all kinds,	40	492.5
31st.	Worms,	33	597
32d.	Influenza,	26	757.7
33d.	Gravel and Stone,	21	938
34th.	Syphilis,	20	985
35th.	Gout,	17	1160
36th.	Asthma,	15	1313.3
37th.	Small Pox,	14	1407.1
38th.	Poisons,	13	1515.4
39th.	Epilepsy,	12	1641.6
	Drinking Cold Water,	12	1641.6

TABLE XXX.

The ages at which deaths in Boston have occurred in each year of a series of twelve years, viz. from the 1st of Jan. 1820, to the 1st of Jan. 1832 — *still born* excluded.

	Under 1 year.	1 to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	100 to 110	Age unknown.	Whole No. of deaths.	Average mean duration of life for each year.
1820	157	94	62	27	57	131	99	94	69	43	40	25	4		112	1014	27.38
1821	184	190	117	47	53	136	133	108	79	53	48	22	3		151	1324	24.32
1822	164	96	54	42	49	129	120	113	76	54	39	22	3		127	1088	27.77
1823	160	94	38	37	51	132	117	119	63	46	42	22	3		91	1015	28.81
1824	199	119	82	39	55	129	138	110	84	54	42	20	4		133	1208	26.27
1825	234	170	104	46	54	136	155	117	81	51	55	26	8		125	1362	25.66
1826	224	123	75	45	50	137	158	117	73	61	45	21	4		34	1167	28.40
1827	168	72	56	29	49	124	129	107	72	46	37	25	2		23	939	30.95
1828	245	106	60	42	58	181	161	98	78	52	37	23	4		15	1160	28 33
1829	200	146	116	42	59	157	151	100	51	53	44	25	5		7	1156	27.22
1830	184	106	92	37	55	143	131	100	63	50	40	20	1		3	1025	28.52
1831	249	133	140	66	60	167	170	115	88	65	48	25	11		6	1343	28.33
Totals.	2368	1449	996	499	650	1702	1662	1298	877	628	517	276	52		827	13801	27.5

Surprised at the proportion of deaths from "*Old Age*," in the Registers, I have carefully reexamined them for the series of 19 years, and find the following results. There have occurred 798 deaths in this period between the ages of 70 and 80; 417 between 80 and 90; 68 between 90 and 100; and 1 between 100 and 110 — making a total of 1284 between the ages of 70 and 110. From these facts it is probable that the number stated in this table as dying from "old age" is not too high.

Under the head of "*Casualties*," *burns and scalds* should, strictly speaking, be classed — they may readily be included by any one investigating these tables. The number of casualties in the whole series, including "burns and scalds," amounts to 530; of this number 229 were "drowned." The smallest number *drowned* any one year occurred in 1822, which was 9; the largest number, in 1827, 22; the average for each year, 12. *Many*, and in some years undoubtedly most of these cases, have happened from unnecessary exposure — utter carelessness. In the bill lying before me for the last year, (1832) 22 cases are recorded. The fact that one third of these cases took place at the same moment, is fresh in our memories. A greater or less number are undoubtedly yearly destroyed by similar occurrences.

The whole number of deaths during the series of 19 years, after deducting the *still born*, will be found to vary but little from 19,700 — this number has been accordingly taken in the calculations made in this bill.

Art. III. — Case of Prolapsus Ani, treated by Compression.

By Zadok Howe, M. D.

In the last number of the American Journal of the Medical Sciences, we have an account of a case of Prolapsus Recti successfully treated by excision, by Doctor Heustis of Alabama: we also find in a late number of the Boston Medical and Surgical Journal, two cases of cure by the use of the actual cautery. It affords me much pleasure to hear of any mode of treatment which will enable the surgeon, with any tolerable degree of certainty, to control this obstinate complaint.

These remedies, although somewhat formidable, cannot be

said to be "worse than the disease,"— if, however, the same object could be attained by more lenient means, it would be still more satisfactory to the parties concerned.

It is not my intention to go into a description of the symptoms of the disease, the sufferings of the patient, the anxieties of the parents, or the perplexities of the surgeon; these are all sufficiently familiar to every medical practitioner. My object is merely to draw the attention of the profession to a very simple method of treatment, which I have found to be successful in one case, and which I will now proceed to describe.

A little boy, between two and three years old, without any apparent exciting cause, was taken with Prolapsus Ani. I prescribed for him, from time to time, for more than four years: during this long period, I went through and through with the usual routine of tonic and astringent prescriptions, without affording even temporary relief. The mother, who is a very intelligent woman, informed me that the intestine protruded, as she believed, every time the child went to stool, for four years, and that it always required the assistance of some one of the family to replace it. In consequence of this, his parents were compelled to keep him constantly about home, if he attended school he always went home when about to have a discharge from the bowels.

He was between seven and eight years old, of good size, and enjoying a tolerable degree of general health, when I concluded to make an effort to apply compression to the margin of the anus. For this purpose a hole an inch and a half in diameter was bored through a wooden chair bottom; a ring of smooth glass was attached to the edge of the perforation, which raised the margin of the aperture about half an inch on the upper side of the chair bottom. Upon this chair he was directed to sit, whenever he had an evacuation, in such a manner that the glass ring might afford an equal pressure upon every side of the anus. The result of this experiment was a complete failure: the ring not only prevented the relaxation of the sphincter ani, but at the same time compressed the urethra and prevented a discharge from the bladder. The ring was then removed, leaving a flat board with a perforation in it an inch and a half in diameter, and made perfectly smooth. This answered the purpose: the prolapsus never returned after the first trial of the board. I was informed by the mother that the chair was constantly used for three months; the perforation, however, was made somewhat larger, after the first few weeks. The lad has

been entirely free from the complaint for the last two years, and is now ten years of age.

I have made trial of the perforated board upon one other patient, a man advanced in years, but as I supposed at the time, a tolerable subject for the practice. He had had the disease but one year, and the intestine did not always descend when the bowels were moved. He has made constant use of the board for more than a year, and still continues to use it, under a conviction that it affords him partial relief; still it does not effect a cure. I suppose that in this subject, a complication of infirmities has so far reduced the powers of the system, that the tone of the parts concerned in the local affection will never be restored. But be that as it may, these two cases contain the whole of my experience in treating prolapsus ani by compression.

Art. IV.—Thoughts on the true mode of improving the condition of Man.

This is a valuable little essay prepared by Dr Caldwell for the Lexington Medical Society, and printed at its request. He begins by remarking how universal are the philanthropic professions of all persons moving before the public either in extended or narrow spheres, and how inconsiderable their success has been, compared with their number and talents, and the zeal and parade which have generally attended their various schemes. He then, very naturally looks for an explanation of the failure; and, as he is a hearty phrenologist, he finds it in the wrong direction of the efforts to improve society which has resulted from ignorance, on the part of those who have made them, of the "human system;" by which he means "the material fabric of man, possessed of life and its numerous attributes."

As the human family is made up of individuals, and as its prosperity, in the aggregate, is composed of that of all its separate members, the questions which the author proposes to solve in the course of his essay, are 1st — "in what does individual prosperity consist?" and 2d, "in what way can it be promoted most certainly, and in the highest degree?" On the first branch of his inquiry he argues as follows:

"Apart from wealth, station, and other incidental considerations, which cannot be embraced in the present discussion, indi-

vidual prosperity, when as perfect as it can be made, consists in a capacity for the highest degree of personal efficiency and rational enjoyment. In plainer terms, it is a fitness in man to be as happy in himself, and as useful to others, as the laws of his being admit. And that fitness is the result of a fair development and sound condition of all the various organs of the system; of that which constitutes man's greatest good; a sound mind in a sound body. And to a certain extent these are inseparable. Let the corporeal condition be as here set forth, and the intellectual will correspond with it as certainly, as, in any other case, the effect harmonizes with the cause.

"I have here again spoken of the organized system, as constituting the real subject of improvement. This I have done intentionally and with a precise meaning, which I wish to be distinctly understood. It is as follows. All that we practically are, and therefore all that we can do, in our present state is the result of our organization. If well organized and in health, we are in a condition to be comfortable, prosperous, and useful; but if our organization be defective or unsound, the reverse is true. To this not a single exception can be adduced, in the realities of the present, or the history of the past. Opposition to this assertion may be safely challenged. To our organization we are as exclusively indebted for the character and amount of our intellectual and moral faculties, as our physical; as positively so for the strength and activity of our reason and virtue, as of our muscles and joints. However paradoxical this may appear to some, or perhaps heterodoxical to others, a thorough knowledge of man *as he is* testifies to its truth. None doubt it but those who look at human nature through the perverting medium of theory, or prejudice, and endeavor to fashion it to their own conceptions. The brain is as truly and obviously the organ of feeling, sentiment, and thought, as the glands are of secretion, and the muscles of motion. A large, healthy, well-toned, and well-formed brain, therefore, gives strength of intellect and soundness of virtue to the philosopher and statesman, as certainly and directly, as large, healthy, and well-formed muscles and nerves do to the arm of the blacksmith or the leg of the dancer. The wisdom of Ulysses was no less the result of organization than the swiftness of Achilles, and the morality of Seneca equally so with the strength of Milo To Homer this truth appears to have been familiar. Hence he has given a large and finely formed head to the Prince of Ithica, and great volume and symmetry of muscles to the son of Peleus. All that is requisite to be learnt, therefore, to insure the highest improvement of the human race, is, how to bestow on individuals the best organization. It must not be forgotten that I mean the organization of every portion of the

system. On this I say depend strength, activity, elegance, grace, beauty, genius and moral worth, and every other excellence, corporeal and mental. To the truth of this, all times both ancient and modern, and every country on earth bear testimony. Other things being equal, that community whose individuals are best organized, is most powerful, prosperous, and happy. In proof of this, I refer, in ancient times, to the Greeks and Romans, and in modern, to the inhabitants of Great Britain, France, and the United States. To the superior organization of the two ancient nations, every fact in history relating to the subject, and numerous productions of sculpture and painting amply testify; and they were indebted to it alike for their splendor in peace, and their glory in war. And as to the latter, the reference to them is equally correct, and equally calculated to sustain my position. They are the best organized people in modern times. A fair comparison of them with the natives of other countries proves the fact. Some portions of the Germans,* Spaniards and Italians come nearest them, but are still inferior. To this superiority of organization are the British, French, and Americans indebted for preëminence in their intellect and morals, prosperity and power. In referring to these points, it must not be forgotten, that the power and efficiency of every description of organized matter are increased by the proper kind and degree of excitement and exercise."

As a means of improving the organization, our author insists much, and we think justly, on the importance of what his great master, Spurzheim, made the subject of the last lecture he ever delivered, under the name of *Innatenes*. He illustrates as follows.

"The first-born children of parents, who marry when very young, are rarely if ever equal, in either body or intellect, to those born at a subsequent period, provided the parents continue healthy. Hence the younger sons of noblemen so generally surpass, in all the higher attributes of our race, their elder brothers, whose only preëminence depends on the privileges attached to primogeniture. I know that an attempt has been made to explain this on a different ground; that of education, expectancy, and habit. But I also know that the attempt has failed. The difference is too great to be thus accounted for. It often occurs, moreover,

* Owing to the forms of discipline they pursue, there is reason to believe, that certain orders of the Germans are at present improving more rapidly in their organization, than any other people. Should they persevere in this course of improvement, for *another half-century*, with the same zeal and steadiness they have manifested during the *past*, they will be equal to the inhabitants of any other nation, in all the higher qualities of man.

when the cause just referred to is wanting. The following is believed to be the true explanation.

Very young parents are, in constitution, immature and comparatively feeble; and that constitutional imperfection descends to their early offspring. As years pass on, their being ripens, and their strength increases. As a natural effect of this, the constitutions of their children become ameliorated. It was a knowledge of this, derived from observation, that induced the Spartans to prohibit marriage, until the parties had attained entire maturity; the females the age of twenty-two or twenty-five, and the males that of twenty-seven or thirty. I need scarcely add, that they were personally the hardiest and most powerful people of Greece, and, as a community, the most warlike.

For reasons well known to phrenologists, the animal organs and faculties predominate during early life. Parents, therefore, who marry, at that period, communicate in a higher degree to their first children the same unfortunate predominance, which renders them less intellectual and moral, and more sensual; less capable, as well as less ambitious of preëminence in knowledge and virtue, and more inclined to animal indulgences. If I am not mistaken, history and observation sustain this view of the subject, and philosophy expounds it."

After recommending the prohibition or voluntary abandonment of too early marriages, he remarks that —

"Another source of human deterioration is a long series of family intermarriages. Be the *cause* what it may, both history and observation testify to the *fact*, that the issue of marriages between parties related by consanguinity always degenerate. They become enfeebled in time both mentally and corporeally. This practice, which is fostered chiefly by the false pride of rank, has reduced almost to dwarfishness the nobility of several nations, especially of Portugal. It has likewise aided not a little in not only deteriorating, but nearly extinguishing most of the royal families of Europe. This case is strengthened and rendered the more impressive by the fact, that the ancestors of those families were the real *proceres* or *natural nobles* of the land; men peculiarly distinguished in their day, as well for corporeal stature, strength, and comeliness, as for mental excellence. Yet, I repeat, that a long line of family intermarriages has contributed much to reduce below the average of mankind the descendants of those ancient nobles, whose high qualities alone gave them station and influence. In this the human race are analogous to our domestic animals, which are deteriorated by breeding constantly from the same stock. Even among the people of certain sects in religion, much mischief is done by the continued inter-

marriages of the members with each other. The condition of the Jews and the Quakers affords proof of this. Those two societies are more afflicted with some form of mental derangement, in proportion to their numbers, than any others in Christendom. They are unusually deficient in distinguished men. This is no doubt attributable, in no small degree, to their so seldom marrying out of their own sects."

Another means of improving the organization, in which we entirely agree with the author, is noticed as follows.

"The skin is to be kept free from impurity, and in a state of healthy excitement and action, by bathing, a well regulated temperature, and suitable clothing. Let no one deem lightly of this measure, or think the practice it is intended to establish unworthy to constitute an element of education. Besides being a source of health and vigor, it contributes to mental purity as certainly as to corporeal. To be voluntarily covered with external filth is not only unseemly, and injurious to health; it testifies that all is not right within, and tends to make it worse. Cleanliness is of great importance at every period of life, but more especially during infancy. Without it neither can health be promoted, nor organization improved, or even maintained in a sound condition. The sympathetic connexion of the skin with all the other parts of the body, and the powerful influence it exercises over them, are familiar to physiologists, and might be illustrated by numerous and striking examples. That organ, being the great outpost of the system, receives first, from the external world, several classes of strong impressions, both salutary and deleterious. It is indispensable, therefore, that it be in a condition to receive them with due sensibility, to maintain its harmony with them as well as with the body it covers, to resist them if they tend to mischief, and to act, in all respects, as a suitable medium between them and the parts within."

After recommending to our readers a perusal of this interesting little pamphlet, we must conclude our notice of it with the following directions and motives for cultivating the moral faculties.

"Am I asked in what way the moral compartment of the brain is to be cultivated, strengthened, and enlarged? I answer, by all sorts of moral excitement; inculcating moral precepts, presenting moral examples, eliciting moral sentiments, but more especially by associating with companions strictly moral, and engaging early in the moral practice of doing good. Reading the biographies of men remarkable for high and practical morality, and well written works of moral fiction, contributes materially to the same end. This course, skilfully and inflexibly pursued, will

infallibly strengthen and enlarge the moral organs, and confirm those persons subjected to its influence in habits of virtue.

"The advantages of the mode of training the brain, to which I have referred, do not consist alone in its improving the taste and capacity of the individual for morality and knowledge. That viscus, as already stated, is improved also in its fitness for superintending generally the functions of the system. Its powers in the aggregate are increased by the judicious and salutary exercise it sustains. No portion of it is suffered to be idle; nor is any one exhausted by excessive labor. Each does its work, to a fair and reasonable extent, and thus, by directly strengthening and benefiting itself, does the same, by sympathy, to the entire organ. But, other things being equal, the more healthy and vigorous the brain is the higher is the health, and the greater the efficiency of the whole system. In a special manner, great advantage, on the score of general health, is derived from the cultivation and strengthening of the moral portion of the brain. The excitement produced on the system by that compartment is comparatively mild, and its influence in a corresponding degree benignant and salutary. When sufficiently powerful it controls the animal compartment, and moderates that vehemence of propensity and storminess of passion, which, like all other excesses, are injurious to health. It is like the cool Etesian winds mitigating the fervors of a southern sky, and restoring health and strength to the exhausted inhabitants. Hence, as a very general rule, those who enjoy the greatest exemption from disease, and attain the most advanced age, are men whose moral deportment is correct. Frequent and boisterous paroxysms of animal feeling are almost as bad as fits of inebriety. They tend, by their intensity, to debilitate the system, invite sickness, and deteriorate the race. By the mode of training here indicated, then, man is improved in his whole nature."

Art. V. — Climate.

[Continued from page 484.]

Italy.—The climate of the south of Italy differs little in actual temperature from that of Provence and Nice, but it is softer, more humid, and less exciting. On the other hand the sirocco, which is scarcely felt at the latter places, forms an objection to the Italian climate, though this objection is not of much weight during the winter.

The only places which we consider deserving of notice as winter climates in Italy, are *Pisa*, *Rome*, and *Naples*.

The climates of Pisa and Rome resemble each other in their general qualities. Rome is somewhat warmer in the winter. It is also drier than Pisa, though more humid than Nice and the parching climate of Provence. About one-third more rain falls at Rome than in the latter country, and the number of rainy days is considerably greater. Taking into account all the qualities of the climate of Rome, we consider it one of the best of Italy: to the invalid capable of taking exercise in the open air, it affords advantages over both Naples and Pisa. Patients, on the other hand, who can bear little exposure to the air, and who must therefore confine themselves to the most sheltered situations, will find in the Lung'Arno in Pisa a residence possessing advantages, perhaps, over every other place in Italy.

Naples differs somewhat in the character of its climate from both the last named places. Independently of the effect which its immediate vicinity to the sea may have in modifying the climate, it is more subject to winds, and the air is more exciting than that of Pisa or Rome. As a residence for invalids laboring under pulmonary irritation, or chronic rheumatism, it is inferior to both; nor are we aware of any cases in which it ought to be considered a more favorable climate. The beauty of the scenery around Naples, however, and the gaiety and excitement of the place and climate altogether, prove very attractive to strangers generally, and render it a very agreeable winter residence for persons who visit Italy rather as a recreation than for the removal of actual disease.

The diseases in which the climate of Italy proves most beneficial, are chronic bronchitis and rheumatism. We have, in particular, observed many decided examples of the beneficial effects of a residence at Rome in both these diseases. But it is still more in the numerous cases of deranged health which scarcely admit of being defined, though well known to the medical practitioner, that a tour and winter spent in Italy will prove beneficial. Such persons need not be limited to any particular situation, but may, with proper caution, visit the different places frequented by strangers in the south of Italy, and that even with greater advantage to their health than if they had remained stationary at any one of them.

These observations have reference to the climate of Italy during the winter and spring, that is, from October till May or June. To such as are under the necessity of remaining in that country through the summer, the baths of Lucca, Sienna, and the vicinity of Naples afford the coolest residences.

There may be several situations on the shores of the Mediterranean which have climates equal, and perhaps superior, to those which have been mentioned. Malaga has been particularly mentioned to us as possessing a very mild winter climate; but our information respecting the south of Spain is too imperfect to enable us to speak positively on this subject. And even were the climate of that country superior to that of the south of Italy, the want of proper accommodations, and the various comforts which are as necessary to the invalid as climate, forms an insuperable objection to them as places of residence for delicate English invalids.

The MEDITERRANEAN ISLANDS do not merit much notice. Some parts of the coast of Sicily afford a pretty good winter climate; but here again the difficulty of obtaining the necessary comforts, and even conveniences of life, renders them almost useless to English invalids.

This objection, however, cannot be made to *Malta*, the only island in the Mediterranean belonging to this country. All the wants of the invalid may be supplied here, and the packets which are established between this place and England afford the means of reaching it conveniently. But, unfortunately, the climate of Malta has little to recommend it to any class of invalids, and least of all to such as suffer from pulmonary affections. The arid nature of the soil, the quantity of impalpable dust which is suspended in the atmosphere whenever the weather is dry, the currents of cold air to which the capital (the residence of invalids) is subject during the winter, and the frequent and heavy rains which prevail during the same season, render it an unsuitable residence for patients of this class. It may not be irrelevant to mention also that phthisis carries off a large proportion of the inhabitants of Malta, constituting nearly one-tenth of the whole mortality, according to Dr Hennen. Indeed, the full and satisfactory information respecting the medical topography of Malta, supplied by this gentleman, affords more than sufficient grounds for excluding it from the list of climates which promise any advantage to phthisical patients. We are not, indeed, aware of any class of invalids likely to derive much advantage from the winter climate of Malta, and we are not acquainted with any to whom its summer climate would not prove injurious.*

* We refer those who desire to examine the facts upon which the above character of the climate of Malta rests, to Dr Hennen's *Sketches of the Medical Topography of the Mediterranean, &c.*

Atlantic climate. The climate of the Northern Atlantic in the temperate latitudes is more steady than that of the Mediterranean, and imparts a similar character to the climate of its islands. Various groups of islands scattered over this ocean, between the 28th and 38th degrees of latitude, having been praised for the excellence of their climate, and occasionally frequented by invalids in consequence, deserve some notice in this place. The Azores, the Madeiras, and the Canary Islands in the Eastern, and the Bermudas and the Bahamas in the Western Atlantic, have all been recommended as suitable residences for persons requiring a mild and equable climate, and more especially for consumptive invalids.

As our information respecting the climate of Madeira is the most complete, we shall notice it first, with the view of making it a standard of comparison in estimating that of the other islands.

Madeira.—The minute and careful observations of the late Dr Heineken and of Dr Renton, for a series of years, have afforded us sufficient data to form an accurate estimate of the climate of this island; and although our materials for enabling us to judge of the other Atlantic islands are much less complete, they leave little doubt in our minds that Madeira is superior to any of them; while it affords conveniences in other respects as a residence for invalids possessed by none of them. The height of the central ridge of mountains which compose the greater part of this island, although it may detract somewhat from its warmth during the winter, contributes greatly to temper the heat of its summer. It gives Madeira the advantage of a coal land-breeze during the night, which, alternating with a refreshing sea-breeze in the day, moderates the summer heat in a very material degree; while the trade-winds which prevail at this season in the latitude of Madeira, contribute also to its coolness and salubrity. The invalid, moreover, by choosing for his summer residence an elevated situation in the interior, finds a climate considerably cooler than that of Funchal which is situated on the sea-shore and affords the best winter residence.

Comparing Madeira with the south-east of France and Italy, we find that, although its mean annual temperature is only about six degrees higher than that of these places, this temperature is very differently distributed throughout the year, the range being far less at Madeira than in the most favored spots in the south of Europe. Thus, while the winter

is twelve degrees warmer than in Italy and France, the summer is five degrees *cooler;* and while the mean annual range at Madeira is only fourteen degrees, it is nearly double this, at Pisa, Rome, Naples, and Nice. In the equable distribution of heat throughout the year, it possesses a similar superiority over the same places; for example, while the mean difference of temperature of successive months at Madeira is only two degrees, at Rome and Nice it is four, and at Pisa and Naples five degrees.

In the progression of temperature during the day, it maintains the same superiority; the mean range for twenty-four hours being ten degrees by the *register* thermometer, while at Nice, it is nine degrees, at Rome ten degrees, and at Naples thirteen degrees, by the *common* thermometer. In steadiness of temperature from day to day, (a very important quality in a climate,) Madeira excels all those places greatly. There is also a considerable difference in respect to the dryness of the two climates. Nearly the same quantity of rain falls at Madeira as at Rome; but there are only seventy-three days on which any rain falls, while at Rome there are one hundred and seventeen days. The rain at Madeira also falls at more regular seasons, chiefly in the autumn, the atmosphere being generally dry, and clear for the remainder of the year.

The annual range of atmospheric pressure is very small, which is the case also at Rome and Naples.

From this comparison, the superiority of the climate of Madeira over that of the south of Europe will be at once seen. We shall have occasion hereafter to notice their comparative influence on disease.

Canary Islands. — These rank next to Maderia in point of climate. They are somewhat warmer; the mean annual temperature of Funchal, the capital of Madeira, being 65°, while that of Santa Cruz, the capital of Teneriffe, is nearly 71°. This excess of temperature, however, is not equally distributed over the whole year, the difference between the winter temperatures at these two places being considerably less than between their summer temperatures; while Santa Cruz is 7° warmer than Funchal in summer, it is only 5° warmer in winter. The temperature is also more equable throughout the year at Madeira than at Teneriffe; the difference between the mean temperature of summer and winter being 9° at the former place, while it is 12° at the latter. The want of sufficient materials prevents us from comparing the climate of Teneriffe more

minutely with that of Madeira. It seems probable, however, that when we are better acquainted with the climate and topography of Teneriffe, we may find it a favorable winter residence. But whatever may be the merits of its climate, it is at present very deficient in the other requisites necessary to render it a suitable abode for delicate invalids.

The Azores, or Western Islands, as they are sometimes called, lie about 5° north of Maderia, and considerably more to the westward. In their external characters these islands resemble Madeira and the Canaries. We have not had the means of making ourselves sufficiently acquainted with the temperature of the Azores to speak very positively on the subject. The climate appears to be mild but somewhat humid; less warm than Madeira during the winter, and more oppressive during the summer. They certainly possess no advantages in point of climate over Madeira while they afford few of the conveniences which that island offers to invalids.

Bermudas. — This numerous cluster of small islands is in the same latitude as Madeira, and differs little from it in the mildness of its winter climate. From the stormy character of the Western Atlantic, however, these islands are much more liable to high winds in the winter than Madeira, while their low character and arid rocky soil render them extremely hot during the summer, and quite improper at this season for the residence of such invalids as are likely to be sent from this country.

Bahamas. — This is another and much more extensive group of low islands, further south than any of those which have been mentioned, being only just beyond the limit of the tropics. The climate of the Bahamas has not much to recommend it. The winter and spring are considerably cooler than the same seasons in the West Indies, while the temperature of the summer and autumn is nearly the same as in those islands. During the winter the temperature is subject to rapid and considerable vicissitudes, and cold, harsh, northerly winds are not unfrequent. The close vicinity of the Bahamas to the North American continent no doubt has the effect of rendering the climate less equable than it otherwise would be, judging from what we know of insular climates generally in the same latitudes.

We may safely dismiss these two western groups with this brief notice; as from the character of their climates, their great distance from England, and the few local advantages which they possess, they are never likely to prove beneficial

as a residence for invalids from this country. They are better suited, in point of climate, and more conveniently situated, particularly the Bahamas, as a temporary retreat for the inhabitants of the islands which we are now to notice.

West Indies. — Although these islands are not often resorted to by real invalids, yet there seems to exist, even among the profession, a vague idea that they afford a preferable climate to that of any of the places which we have noticed. That this opinion has been formed from an imperfect knowledge of the nature and effects of a tropical climate, we shall endeavor to show.

The mean annual temperature of the West-India Islands, near the level of the sea, is about 80°, and during the six months which include the winter season the temperature is only 2° lower. Now it will be readily admitted that few invalids are likely to be benefited by so high a temperature, more particularly when continued, almost without sensible variation, night and day. The extreme annual range in the West Indies does not exceed 20°, while the mean daily range throughout the year is only 6°. But it is not so much the actual degree of temperature of a tropical climate, as its unceasing and unvarying character, which oppresses and exhausts the invalid more especially in cases where there exists a disposition to symptomatic fever.

From this brief account of the climate of the West Indies, it is evidently an improper one, generally speaking, for consumptive invalids, who, nevertheless, are frequently sent thither. The uniformly high temperature, and almost cloudless skies, which afford no shelter from the direct rays of a tropical sun, preclude invalids from taking exercise in the open air, the principal object for which they are generally sent abroad. There is no twilight to compensate for the heat and glare of the day, and the nights are too hot to admit of refreshing repose. When we add to the foregoing evils of climate the many privations, discomforts, and annoyances which are almost inseparable from a temporary residence in these islands, and the still more weighty objection derived from the experience of medical men who have resided there, we may consider the question of the propriety of sending patients laboring under consumption to the West Indies as finally set at rest. The concurrent testimony of all the medical men whom we have consulted on the subject, and whose opportunities of judging were ample, establishes the fact that consumptive cases sent thither from this country proceed

much more rapidly to a fatal termination than in temperate climates.

Notwithstanding what has just been stated respecting the climate of the West Indies and its influence on consumption, we are not prepared to say that some, nay, many cases of deranged health, of a different nature, might not be benefited by passing a few of the less sultry months (from November to February in that climate; more especially if the invalid possessed the means of enabling him to spend the greater part of his time on the water, merely visiting some of the more healthy islands occasionally. The remarkable revolution effected in the distribution of the circulating fluids, and the immense increase in the secretion from the cutaneous exhalents, excited and steadily maintained by a high atmospheric temperature, and this continued without intermission for many months, or even years, is unquestionably capable of producing material and very important changes in the animal economy, and may therefore be made a powerful agent in the cure of chronic diseases.

Calculous disorders are extremely rare in the West Indies, a circumstance which probably depends, in a great degree, on the abundance of the cutaneous secretion, by which the larger proportion of fluid is discharged from the system, and along with it some of those saline principles which constitute the chief ingredients of which urinary calculi are composed. A well known case has been recorded of an officer who was about to undergo the operation of lithotomy in this country; he was suddenly ordered to Jamaica, and after some time, no calculus could be discovered in the bladder, nor were there any symptoms of the existence of one. Aneurisms and diseases of the heart and large vessels are also rare, and the osseous deposits, which are so generally found in the coats of the larger arteries in persons who die at an advanced age in cold climates, are said to be rarely met with in those who die at a similar age in the West Indies. Gout is not common, and rheumatism neither frequent nor severe.

Reasoning on the above facts, we should expect that the climate of the West Indies would prove serviceable to persons laboring under what has been denominated the calculous diathesis, in which there is a constant disposition to renal irritation, and the formation of gravel, upon any material change of the weather, or any trifling derangement of the digestive organs. The functions of the skin in such persons are generally imperfectly performed, and it is not unreasonable to believe

that the powerful action excited, and unremittingly kept up for some months, in the cutaneous exhalents might effect a permanent change in the constitution, and if followed up by warm clothing, daily friction, and a proper diet, might entirely destroy the disposition to the formation of gravel. Upon the same principle this climate also promises benefit to persons in whom we have either positive or strong presumptive evidence that ossific deposits are forming in the arterial system, and laying the foundation of aneurism or diseased heart. Reflecting on the powerful effect of a high temperature on the various secretions, we think it not improbable that the further progress of such a morbid process might be checked by a timely removal to the West Indies, or any similar climate, and a residence for a longer or shorter period there, according to the circumstance of the case. What has been already stated respecting the rare occurrence of calculous disorders and diseases of the arteries in this climate, affords some grounds for such a conjecture; and it may be adduced in further support of it, that *gout*, a disease intimately related in its nature and causes to both the preceding affections, is greatly relieved, and even entirely cured in many cases, by a change from a cold to a hot climate. This effect of climate has long been known. Van Swieten mentions the case of a gentleman who had almost entirely lost the use of his hands and feet from gout, and who, after a residence of nearly three years in the East Indies, returned perfectly free from disease, and continued so; and Haller relates the case of Lord de Poincy, who, when an old man, went to the warm American islands, and got rid of his gout and other infirmities. And such instances must have come under the observation of almost every physician.

Scrofula is a very rare disease in the West India islands, and there are many cases of scrofula in this country which we have little doubt would be greatly benefited, if not cured, by a temporary residence in that climate. The cases in which we should expect the greatest benefit are those in which the disease exists chiefly in the lymphatic glands in torpid constitutions.

We have now noticed the principal climates, both in our own and foreign countries, which have acquired the greatest reputation as places of residence for invalids, and regarding which our information is sufficiently accurate to enable us to speak with much certainty. From a residence at one or other of these places, or at several of them in succession, all that climate can effect may, we believe, be obtained by the invalid

whose disease admits of benefit from a change of this kind; provided always that the climate which is best suited to his disease and constitution be selected. In making this selection we must, in the present state of our knowledge, be guided chiefly by experience; for although an acquaintance with the physical characters of a climate is highly useful in enabling us to form a tolerably correct opinion respecting the diseases in which it will prove beneficial; still, until we have had some experience of its effects, we can never be sure that our conclusions are correct; so complex is the subject of climate, and so many are the circumstances, some having reference to the agent and others to the subject, which require to be taken into account.

We shall now state briefly the effects of climate on those diseases on which it has been found to exert the greatest influence.

Pulmonary consumption is the disease in which, from its supposed dependence on climate, and its being found to resist all other modes of treatment, this remedy has been more particularly had recourse to, and almost as the only remaining hope. This is not the place to enter into a full detail of the circumstances under which climate promises benefit in that disease. We may, however, remark here, that climate, to be productive of real benefit, must be tried at a much earlier period in the progress of tubercular disease than it generally is. Such is the insidious manner in which consumption, in many cases, steals upon its victims, that it has too often stamped its indelible impression on the vital organs ere the alarm is sounded, or climate or any other effectual means of treatment, have been seriously thought of. Before we can reasonably hope to cure phthisis, we must take a much more comprehensive view of the pathology of that disease than we have hitherto done: in place of fixing our attention solely on the diseased state of the lungs, we must direct it to the morbid condition of the system, — to the tubercular cachexia in which phthisis has its origin. As regards the application of climate to the disease, it is not, we believe, saying too much, when we state that consumptive patients are, for the most part, sent abroad one year at least, often several years too late to derive any essential benefit from change of climate.

During that peculiar state of deranged health which may often be observed to precede tubercular cachexia, and during the existence of this morbid state of the constitution, before the disease has manifested itself in the actual developement of tubercles in the lungs, change of climate forms a powerful ad-

junct to the other means best calculated for removing such a state of the system. When tubercles already exist in the lungs, the chances of cure are immeasurably lessened; but even then climate affords one of our most valuable resources, and one which promotes the salutary action of all our other remedies; and although our hopes of benefit under such a discouraging state of things must in general be faint, we believe the further progress of the disease may, in some cases, be thereby arrested. But such instances of success are no doubt very few, compared to the many which proceed unchecked in their course to a fatal termination, in despite of climate and every other means which we can oppose to their progress. We would therefore beg to impress upon the minds of our professional brethren the urgent necessity of directing their attention to the earliest indications of this disease, seeing how utterly inefficient all our efforts are even to stay its fatal career, when so far advanced as to manifest itself to the common observer. Until the tuberculer affection of the lungs, which constitutes the essential character of what is commonly termed phthisis, is considered in its true character, as the last stage of a disease,—as the result of a morbid state of the system, which in its progress might often be cured, but which in this its termination is scarcely to be remedied,—we must still continue as heretofore, little better than idle spectators of the ravages of a disease which destroys one-fourth of our population, and numbers among its victims a large proportion of the best and fairest of our youth.

In proof of the correctness of our opinions respecting the influence of climate on phthisis in its early and late stages, we shall give the experience of Dr Renton, an intelligent and observing physician, who has long practised at Madeira, and has had ample opportunities of watching the effects of that climate on phthisical invalids sent thither from this country.

This gentlemen has favored us with notes of the cases which came under his own particular observation. From these we find that between the years 1827 and 1830, *nineteen* patients laboring under confirmed phthisis arrived in Madeira, the whole of whom died; the greater number on the island, the remainder after returning to England. Of *thirty-three* cases of incipient phthisis, which arrived during the same period, *twenty-three* are now at home, (June, 1830,) apparently in good health; two remain in the island, one apparently well, the other considerably better since his arrival, but still in a doubtful state; two died, one in the island, and another after

leaving it: the fate of the remaining six is not known. We consider this statement as a satisfactory reply to those who doubt and cavil respecting the influence of climate; their opinions being formed in general from a few cases sent abroad at a period of the disease when no hope of benefit could be reasonably entertained. It is only by such numerical records as the above, that we can expect to arrive at accurate conclusions respecting the influence of any means of cure in a disease, which will prove fatal in a very large proportion of cases, under any circumstances. The result in the first series of cases is nothing more than every one would expect who is acquainted with the nature of phthisis, and knows the state of the lungs in what generally passes under the name of confirmed consumption. But while Dr Renton's experience of the effects of the climate of Madeira shows the inutility of change of climate in the advanced period of phthisis, it holds out considerable hopes from the adoption of this measure in its early stages: of *thirtythree* cases of incipient consumption, *twentyfour* were apparently cured. Such a ratio of success, we have reason to believe, has never before been observed among consumptive invalids sent to Madeira, and for this plain reason—that they were rarely sent till the disease was too far advanced to admit of recovery. Dr Renton remarks in his communication to us, "With respect to the invalids sent out, they have been very different for the last two or three years from those sent out formerly." We have the satisfaction of thinking that we have contributed, in some degree, to this favorable result, by our appeal to British physicians in the work already referred to; and we shall be happy to find that the striking proof of the truth of our former remarks, now recorded, induces our professional brethren to pay still more attention to this subject.

To be Continued.

COLLECTANEA.

Egyptian School of Medicine.

Our readers have probably already heard of the successful progress which medicine is making in Egypt. The Acadèmie de Médicine in Paris was last week the scene of some highly-interesting disclosures from M. Clot, relative to this subject. The session of the 13th of November was appointed by the Academy for the public reception of the mission which has lately arrived from that country, and we are enabled to present the profession with an original report of the proceedings. At the opening of this deeply interesting meeting, the two most elevated and central benches of the academic precinct were occupied by twelve young Egyptians, who have been sent to France to pursue the study of medicine. In the midst of these young men, and distinguished by his brilliant costume, was M. Clot, the chief physician of the armies of Egypt, the founder and director of the school of Abouzabel, a Frenchman by birth, but promoted for his merit and labors to the rank of Colonel and Bey. All eyes were turned in fixed attention on the extraordinary scene the Academy presented on this occasion.

The young men brought to Paris by M. Clot were selected from the school of Abouzabel, in which two of them are already professors. Their sombre figures and marked countenances formed a striking contrast with the surrounding assembly. The costume of the officers was red, richly embroidered in gold; and the assistants, sub-assistants and major surgeon, bore marks of distinction of rank. A red Grecian bonnet formed their head dress. The pupils were habited in blue garments of simple fashion. M. Clot, who was also dressed in scarlet, wore a head dress composed of a magnificent shawl turban of cachemire, a superb Damascus in his girdle, and brilliant stars of diamonds on his breast. His complexion and figure had become so completely oriental, that those even who knew him before he left France could with difficulty recognise him. The academy waited impatiently the recital of his adventurous labors—of the means by which he succeeded in transplanting European medical pursuits into a barbarous country, to the language, customs, and religion, of which he was a stranger. On the invitation of the president, M. Clot, after apologizing for the difficulty he experienced in addressing a French assembly, gave an account of his career in the following terms:—

" I was an inhabitant of Marseilles, in which city I had practised medicine for several years, when an agent of the viceroy of Egypt made me proposals to proceed to that country to organize the service of health. Proceeding thither in January 1825, with some companions, I was first of all employed in the organization of the military medical department. At that time the regular troops of the Pacha amounted to about 25,000 men, and occupied Lower Egypt and the Morea. Their officers of health were persons of the lowest descriptions. Shoemakers and bakers, who had consecutively become infirmary attendants, apothecaries, and physicians, without any examination, or any proof of capacity or knowledge. The Pacha testified his desire to have his service organized as it is in France, a wish which corresponded completely with my own.

" I first proposed the formation of a superior council of health composed of three persons—namely, the first physician of his highness, another physician of the court, and the Pacha's private medical attendant. I was not myself a member. The government was satisfied with giving me the absurd title of physician-in-chief to the forces, a title which possessed no importance or reality, except in time of war. An apothecary-in chief to the forces was also created. This being done, I suggested that all the officers of health should be obliged to undergo an examination, and that those should be rejected who did not afford proofs of competency in the treatment of diseases. This measure, as may be imagined, procured me numerous enemies, and the speedy rejection of a number of ignorant candidates created such animosity against me, that my life was attempted by an assassin in the amphitheatre. Regimental hospitals were also created. I obtained for the medical officers the full use of military insignia and the enjoyment of military rank and prerogatives. The army of the Pacha being soon augmented to 60,000 men, officers of health were wanting in proportion. To meet this want, I proposed to transform into a school of instruction the hospital of Abouzabel, situated near the Heliopolis, and built on the ruins of an old barrack. I summoned to this seminary the best informed of the rising generation, and one hundred young Arabs were the first pupils. New difficulties now presented themselves. We were mutually ignorant of each other's language. How then, I said, were the pupils to be instructed? I fortunately succeeded in finding in Paris three persons who understood French, Italian, and Arabic. But these persons were destitute of medical knowledge. I told them they should become physicians, but that they should first be pupils. I accordingly set them to work on the translation of a treatise on anatomy, lessons from which were dictated to the pupils who were afterwards examined by means of interpreters. But plates and wax figures having failed to communicate the necessary

anatomical knowledge, the dissection of the actual subject became essential. But here almost insuperable obstacles were before us. Independently of the idea of profanation of the body, the Egyptians have a theological doctrine that the dead feel the tortures to which they may be subjected.

"The pacha and the ministers-of-war refused to undertake the responsibility of sanctioning the practice. At length, however, the chief of the Ulemas, a learned and enlightened man, though a devotee, was induced to *connive* at it. About two pupils were persuaded to commence on detached parts of the body. They were soon cured of their prejudices, and convinced of the indispensability of dissection: in turn, they convinced their parents and relatives; these instructed the rest of the people; at length, from mere toleration, we were afforded actual encouragement, and Ibrahim Pacha and his ministers of state assisted at a lecture on practical anatomy.

[A general murmur of approbation here rose through the Academy. M. Clot then continued.]

"Our labors of translation were meanwhile persevered in, and we succeeded in accomplishing the version into Arabic of M. Magendie on Physiology, and M. Begin on Elementary Surgery. With regard to the nomenclature, I had recourse to the following expedient. A number of learned men were engaged and employed in collecting amidst oral traditions and written books, all the medical terms they could find. Five or six thousand words were thus obtained, and when it became necessary to invent a new one these persons, in full academy, made choice of the new term. Five years thus passed away, when at length the murderous cholera burst over Egypt. The foreign physicians fled: in twenty-nine days Cairo, in a population of 260,000 persons, lost 60,000. Left alone in Cairo, I despatched all the pupils from the school. One of them now present was attached to the household of the pacha, and treated sixty patients with success. Of these 150 pupils, 30 perished by the epidemic, at the termination of which they returned to the school, from whence 100 were soon called to accompany the expedition into Syria.

"To conclude; the necessity of native professors now became obvious. I proposed to the pacha, whose inexhaustible benevolence made all our undertakings less difficult, that a certain number of the most distinguished pupils should be sent to Europe, at the public expense, to study in the western schools, and bring back into their own country the knowledge acquired abroad. This proposal was at once agreed to. As for myself, the pacha requested that I should preserve in France the custom of the East. My rank has cost me no sacrifice of opinion or change of creed. The toleration of Mehemet is as boundless as his benevolence. As well as the rank of Bey he has conferred on me that of *Colonel*, with pecuniary appointments to the amount of 36,000 francs per annum.

Hypochondriasis.

It is very common for young men to be in a state of hypochondriasis. I have had a large number of young men in the hospital in this condition. They complain of extraordinary sensations in various parts of the body. They are giddy; their head aches; they have pain in their feet a pain in one toe, and a number of fanciful symptoms; itching of the scrotum; quivering in the back; itching in the nose, and ten thousand other ridiculous things, which, ridiculous as they may appear to others, create great alarm in the mind of the individual; and I have no doubt that the sensations themselves continually arise through disease. For the most part they are not at all severe, but they give rise to an extraordinary degree of apprehension of mind, so as to make the patient perfectly miserable.

There was a young man here the other day who did not in the least show illness. I do not believe he had any desire whatever to deceive. One day his complaint was that one testicle hung lower than the other; another day, that it did not roll over in the usual way, and he made himself completely miserable. I have to treat many cases of this description in young men, and they almost all tell you something respecting their sexual organs. They have nightly emissions, or excessive emissions, or they have no desire, or if they go to a female they "do no good;" I do not know whether this circumstance arises from their having indulged in any beastly gratification, but at any rate there is a large number of such people who will tell you that they have so indulged. I don't know that the complaint is ascribable to that source, but most of them dwell on that point; and when they have courage enough to tell you their mind freely, they for the most part begin to say that they have done something of that description.

Treatment.—Now the treatment of these cases consists, so far as I have been able to judge, in removing any particular symptom you can lay hold of. If you see the head heavy, the eyes looking dim and heavy, and the head hot, it is best to take blood from the neighborhood of the head. If you find constipation, it is right to remove that state of the bowels by aperient medicines. But besides that, it is of great use, if they will bear it to give tonics. Quinine answers well; iron answers better; but I find the cold shower-bath to be the best of all. I think you will do most good in a great number of these cases by the latter means. There may be some symptoms which it may be necessary to obviate. There may be a derangement of function of the head, and in these cases it is necessary to take measures in order to remedy this derangement. But still in that case I have employed the cold shower-bath with the effect, in numerous cases, of curing the complaint; mercury generally does harm.

It weakens the patient, and therefore it is best not to exhibit it. Besides if you employ the cold shower-bath while employing the mercury, there is a danger of giving the patient rheumatism or some internal inflammation.

In the case of the patient of whom I am now speaking, I employed the shower bath regularly; but in the midst of it—while I was in great doubt as to whether there was any thing the matter with him or not, whether he was shamming, or was in a state of hypochrondriasis—he told me that he spit blood, and he showed it to me. I did not see it come up, and I am not sure, now, whether he did really spit blood, but I should rather think he did. This however, was no objection, on my part, to using the cold shower-bath. He used it just the same as before. When he first told me that he spat blood, I ordered the cold shower-bath to be omitted. In a day or two the symptoms went off, and the bath was had recourse to again. A few days after he again complained of spitting blood, but I then continued the shower-bath. The blood ceased to return, and he became perfectly well. I took it for granted that he really had spitting of blood, and that from the bronchiæ, for there was no crepitous rattle. He always said, that he had spit it up many hours before I saw him, and if any blood had remained it would have given rise to sibilous or sonorous rattle. But that was not to be heard.

You will find that the cold shower-bath is one of the best remedies in spitting of blood, provided there is no pain of the chest, nor inflammation. I have had many patients who have spit blood, notwithstanding which, I regularly employed the cold shower-bath; and not only did it do no harm, but on the contrary, put a stop to the disposition to spit blood. I have seen them recover their health, strength, and spirits, and become perfectly well. I have in my recollection at this moment a very remarkable instance of this kind. A young man came to me whose brother was spitting blood at the same time as himself. They were both of them so much disposed to consumption, that it was an even chance which should die first. However, one grew much worse than the other; he spat a larger quantity of blood, and signs of abdominal disease and phthisis came on, and he died. The other brother had no sign of abdominal disease, and did not spit blood so profusely. But having done no good to his brother, I told him that I should wish him from the experience I had had, to use the cold shower-bath, notwithstanding the spitting of blood. He did so, and he is now alive. He used it throughout the whole of the last winter in the hardest frost, and has never spit blood but once since, and then only a very small quantity. He did not require any medicine, and he is really now a pretty strong healthy young man.

Of course it would be wrong to employ the cold shower-bath when there is pleurisy, — when there is pain on inspiration.

Then you have to remedy inflammation of the chest. Again, a patient may be so feeble as not to have the glow which every one ought to have after the use of the cold shower-bath; under these circumstances it would be very wrong for you to employ it. You should then use it moderately tepid, and as you find the patient bears it, gradually reduce the temperature, till at last it may be borne quite well at the temperature of the atmosphere. You will find it to be a most valuable remedy.

This young man in the hospital lost his hypochondriasm, lost his hæmoptysis, and felt quite strong and well, having come in on the 26th of July, and left us on the 11th of October. Sulphate of quinine was given him. The state of the bowels were remedied by moderate aperients. He took about half a drop, sometimes less, of croton oil, every night.

We have not a patient at this moment in the hospital, laboring under the complaint, but you will continually see it in the way I have now described, and in all the young patients I have seen, the disease has been entirely cured or nearly so, when I had full power to treat them. I have seen them quite impotent during the time it lasts, and afterwards they have recovered their powers entirely to their satisfaction.—*Elliotson's Lecture.*

Conferva Helminthocordon, or Corsican Moss.

This article was introduced to the notice of the profession about two years ago, as a remedy in cancer and scrofulous affections; and it has long been regarded by the Italians and Germans, as a valuable anthelmintic. I have employed it a good deal, in the *marasmus* of children, and often with the most decided advantage. Children affected with chronic irritation of the bowels and feeble digestive powers — manifested by costiveness alternating with mucous diarrhœa, a hard and humid state of the abdomen, a pale countenance, with occasional tumefaction of the upper lip, emaciation of the extremities, and, often, with enlargement and induration of the lymphatic glands along the neck, may frequently be greatly benefited by the use of this remedy. About ten months ago, I prescribed for a child, between three and four years old affected with a troublesome dry cough — tumid and very hard abdomen — great irregularity of the bowels — a pale countenance — constant tickling in the nose — enlarged and indurated glands along the neck — extremely variable appetite being at times quite voracious, and then wholly depressed; alvine evacuations very unnatural, usually mucous and of clay color. These symptoms had continued for upwards of a year, when I first saw the child. She was pronounced to be laboring under incurable scrofulous disease of the lungs and mesentery, by the attending physician. As she had just passed

through a course of mercurial purgatives, I prescribed at once, the following preparation. ℞ *Conferv. helminthocord.* ʒ ii. boil in a pint of water, down to ℥ vi; and add *sulphat. ferri* gr. viii. Of this, the patient was directed to take a large tea spoonful three times daily. The medicine was continued for near three months, and the child gradually recovered a state of full health. I have the most satisfactory reasons for believing that the celebrated vermifuge of Mr Swaim, is nothing else than a concentrated decoction of the helminthocordon. In taste, they resemble each other perfectly, and so far as I have been able to learn, the effects of this nostrum correspond with those which are, in general, produced by the Corsican moss. I obtained a few pounds of this vegetable, from New Orleans. It is, I believe, not to be procured in the shops of this city, though highly worthy of attention. Its usefulness in scrofulous affections arises, doubtless, from the iodine which it contains, in common with the majority of the marine confervæ and fuci. — *Western Medical Gazette.*

On the central Laceration of the perineum during Labor.

Nothing is more common than the laceration of the posterior commissure of the vulva, extending more or less to the perineum, during accouchment. It constitutes one of the most simple of surgical injuries, and but rarely requires particular treatment. But this laceration sometimes affects the inferior extremity of the posterior wall of the vagina, the perineum in its entire extent, as far as, and even including, the sphincter of the anus, and the anus itself to a certain extent. In this degree it constitutes a very serious injury, and one to which a special lecture will be devoted. In the present we have only to treat of the perforation or central laceration of the perineum, without any lesion of the commissure of the vulva, or anal sphincter, and of the passage of the infant, umbilical cord, and placenta, through the opening thus formed. The chronicles of medicine present us with many examples of this occurrence, nevertheless distinguished writers, whose opinion is authority in obstetrics, considering an accouchment of this nature as a geometrical impossibility according to the disproportions which exist between the dimensions of the perineum and the volume of the mature fœtus, have thence inferred, that the facts related by authors were merely erroneous assumptions deserving no confidence whatever. It is indeed difficult to conceive how a part, which is ordinarily but eighteen lines in extent, can lend itself to such an amplification as to permit the passage of so voluminous a body as that of the nascent child. But this mode of reasoning is almost an insult to nature, which daily shows us multitudes of phenomena, the

causes and mechanism of which are still beyond our knowledge. If the fact exist, the examination of the ways and means which it employs is, for us, only a secondary object, which science nevertheless should turn to its own profit. A case then which has recently presented itself, and the history of which I shall relate, can leave no doubt any longer even with the most prejudiced on the subject, and will corroborate the anterior observations of the authors whose veracity has been impugned by the scepticism of modern accoucheurs.

Old Cases.

The oldest fact of this kind on record, does not appertain to the human species, but was observed by the immortal Harvey in a grey mare belonging to the Queen of England, which animal for her rare beauty had been tied up in such a manner as to defend her from the approaches of the horse; but whether the precaution was too late, or whether in despite of the precaution, the mare nevertheless became impregnated, and the term of gestation having arrived, the foal was expelled through the centre of the perineum, leaving the commissure of the vulva and sphincter ani entire. *(Exercitationes de Generat. Animal.)*

1. In 1778, Nedey, a surgeon of Besançon sent to the Academy of Surgery a case of rupture of the central part of the perineum, in which he stated the infant and appendages were expelled without laceration of the vagina or sphincter. This fact, which excited the astonishment of the Academy, only seemed doubtful, says Baudelocque, to those persons who were ignorant of the extent the developement of the perineum is susceptible of attaining during parturition.

2. Another well known case is that recorded by Coutonly. On the 13th of January 1788, this celebrated accoucheur was sent for to the house of Madame Luizerne, to attend a lady named Leroy, whom he had delivered the preceding year of twins of five and a half months. "This female," says Coutonly, "seemed to me at the very instant of parturition. The head of the child pressed continually and powerfully against the perineum, which was so distended that all my aim was to prevent its laceration; but my precautions were useless; the central part of the perineum was torn. The head continuing to press with the same violence against my hand, I found myself compelled to permit to pass through this extraordinary opening both the infant and the placenta, which immediately followed. The infant was of the full term and size. I immediately sought to ascertain what had taken place. An inch above the anus towards the centre of the perineum there existed a lacerated hole whence two other openings proceeded, one which followed the direction of the raphe, and stopped a little below the vulva; the other deviated to the right side, forming, together, a wound closely

resembling the figure of a Y. Neither the sphincter ani, nor the rectum, nor the fourchette, was included in the opening. The wound was cicatrized in five weeks.

3. In Denman's " Introduction to the Practice of Midwifery," a similar case is related, cured in six weeks, and the patient in which case was subsequently delivered of another child by the natural passage.

4. The 14th December, 1812, M. Jubert was called at six p. m. to a lady, aged 23, in the ninth month of her first pregnancy. The head of the child presented in one of the three last positions. The labor was slow, and only terminated on the evening of the 15th, by the rupture of the central part of the perineum, the extreme distention of which amounted at least to five inches. Delivery took place through the wound, which healed in five weeks. This female again became pregnant, and was confined naturally without the slightest accident three years after the rupture.—*(Journal de la Société Médicale d' Emulation.)*

5. Meckel has related in the *Neues Journal fur die Chirurgie*, &c., t. iv. 1811, a case of this kind in a first labor.

6. MM. Gravis and Lebrun have also, in the *Annales de la Médecine Physiologique*, July 1825, recorded another.

7. In 1822, Dr Merriman assisted at the accouchment of a female in her first labor, which advanced with great rapidity; the perineum was excessively distended, and the accoucheur supported it with the palm of the left-hand, but all of a sudden he felt something slide behind it, and found that the fœtus had been expelled through a central laceration of the perineum. The commissure of the vulva and the sphincter ani were untouched, and the mother did well. *(Merriman's Synopsis*, &c., 1826.)

8. The history of a like fact of which Dr John Douglas was witness, has been related by him in the " Dublin Hospital Reports," Vol. III, 1822. Called to a female in labor, Dr Douglas found the child on the point of passing through a laceration of the perineum, the head applied against the left thigh, and inclined backwards. A strong contraction sufficed to expel the rest of the body. The perforation comprised the lateral part of the perineum, part of the integuments of the thigh, and the left labium externum. The fourchette was not divided. The umbilical chord was drawn through the vulva, but this did not prevent the escape of the placenta through the wound. In the course of the treatment the commissure became gangrenous, and was obliged to be divided by the knife. The cure nevertheless, soon took place.

9. On the 31st of May, 1824 Surgeon Marter, of Konigsberg, was precipitately called to a woman who was in labor of her first child, and aged 25 years. The midwife told him the child was passing by the rectum. On the first glance it seemed, indeed, that the anterior wall of the rectum, and the posterior of

the vagina, were torn together with the perineum, and that the fœtus was advancing through this chasm. The head was too far advanced to permit of pressing it back. Finally, the child was forced through the wound, and the afterbirth followed without the slightest injury being done to the vulva, the rectum, or sphincter ani. The laceration commenced immediately above the anus, and extended along the raphe to an inch behind the vulva. Corresponding to this rupture was that of the posterior wall of the vagina, which also terminated anteriorly an inch from the external orifice. Two transverse ruptures also existed in the perineum, so that the wound was of a crucial form. A bridge of flesh, an inch wide, remained between the commissure of the vulva and the interior angle of the wound. Profuse hemorrhage occurred after the delivery, but was soon arrested by cold lotions. The perineum, however, became the site of a considerable inflammatory swelling, which did not subside completely for fifteen days. On the sixth day two points of suture were applied, so as to keep the four angles of the wound in contact. Complete reunion was long in taking place, and a vagino-perineal fistula supervened, through which the catamenia flowed for more than two years. In 1827 she was again confined, and, very promptly by the natural passages. (*Rust's Magazin.* &c., t. xxvi, 1828, and *Siebold's Journal für Geburtshülfe*, t. ix, 1831.)

10. In the following case extracted from the work of Moscheuer (*Conspectus partuum in Lechodochio Pragensi*, &c. Prague 1826), the infant passed through the perineum, only in consequence of gangrene of this part, determined by excessive and protracted pressure, the vulva being unusually narrow. In 1823 a female, æt. 35, pregnant the second time, came to the Lying-in Hospital at Prague. The waters had broken six hours previously, and the pains, originally very strong, had ceased for half an hour. The summit of the head was perceived in the vulva, which was rounded and very narrow. The perineum, powerfully distended and compressed, was gangrenous from the anus to the middle. A communication existed between the rectum and the posterior wall of the vagina, which permitted the finger, introduced into the rectum, to reach the face of the fœtus. The fourchette, which had been torn two years previously, during a first accouchment, offered a hard and resisting cicatrix, in which Professor Jungman recognised the chief obstacle to the labor in the progress, and he, consequently, determined to retain the child's head by the forceps, to divide the cicatrix, and then extract the child by the vulva thus dilated. But one branch of the instrument was scarcely introduced, when a great quantity of sanious and fœtid pus escaped. The contractions immediately returned, and the head protruded through the gan-

grenous perineum. The body quickly followed, and in eight minutes the afterbirth also. In two months the patient left the hospital, but the report does not describe her condition.

11. We find also, in the *Der Neue Chiron*, t. i, 1822, published at Sulzbach, a case in which Dr Frank describes the history of a perforation of the perineum through which the left arm was passed, but the head coming by the vagina, and the infant having been extracted by the vulva, this fact, which we only relate for its peculiarity, proves nothing for the topic in dispute. But I think it right to give the principal details of a case which occurred in the practice of M. Evrat, and was published by M. Moreau, at present a professor in the faculty of medicine, and who attended the patient from her accident to her recovery. (*Revue Médicale*, June 1830.) Madam D., residing in Paris, Quartier Poissonnière near the Boulevards, æt. 20, had reached the term of her first pregnancy without any accident, when she called on M. Everat on the 3rd of March 1815. The child presented itself in the fourth position of the head which readily entered the pelvis ; but when it had arrived at the perineal contraction, it experienced great difficulty in passing under the arch of the pubis. In the midst of a powerful pain, M. Evrat thought he felt the middle of the perineum, against which he was pressing, loosing its thickness and elasticity, and yielding sensibly to the pressure of the head. While reflecting how he could prevent an imminent laceration, a violent and ungovernable pain expelled the child, but in such a manner that the head, instead of passing by the natural way, burst through the perineum, leaving the commissure of the vulva and the sphincter ani untouched. The irregular wound thus produced, extended to the right in the direction of the ascending ramus of the ischium, and descending branch of the pubes. Anteriorly it passed above the level of the posterior commissure of the vulva; posteriorly it wound round the anus to a little distance. Transversely it extended from right to left between the anus and the vulva, nearly to the left tuber ischii. The placenta quickly followed by the same passage. The finger introduced into the rectum, ascertained that the intestine was not comprised in the wound. M. Evrat having been obliged to go to England, M. Moreau remained in charge of the patient conjointly with Professor Desormeaux. The treatment was extremely simple. The patient was laid on her side ; the legs and thighs brought together in a state of demiflexion ; the wound dressed with charpie. She was kept on low diet ; the bowels maintained open by lavements and mild laxatives, lest the efforts of fæcal expulsion should injure or break the cicatrix. The patient obeyed the directions with unusual exactness, and in five weeks was perfectly cured. Since then this young lady has been confined a second time at full time, and,

without accident, the cicatrix resisted the labor, and there took place only the slight laceration of the commissure that so frequently happens in first confinements.

Remarks — Frequency of the Case?

Well then, when Coutonly, one of those men who have done most honor to science, related a similar case, people went so far as to allege that he had either lost his wits or his sight. It will be said too, perhaps, How can we imagine such a case? No matter how you conceive it, so as the fact is demonstrated. But, seriously, is it as difficult to explain an accouchment of this description? Every body who has seen a first labor, must have been in apprehension of a general rupture of the parts, when the vulva stretches with such difficulty, and the perineum becomes so thin and distended. In fact, I am firmly convinced that this perineal parturition is of infinitely more frequent occurrence than experience would seem to indicate. I believe that it is overlooked in the majority of cases, in consequence of the commissure breaking too, and the accident thus being classed with ordinary lacerations of the fourchette.

Causes of such Deliveries.

Let us now examine what are the probable causes of deliveries of this nature. Such persons as have paid a special attention to anatomy, midwifery, or affections of the genito-urinary organs, must have frequently met with instances of unusual high position of the orifice of the vagina, while, at the same time, the perineum from before backwards is of unusual extent or depth. In these cases the vulva appears to be, and actually is, extremely narrow, and persons who have not studied this disposition of the parts, judging of the diameter of the vagina by that of the external orifice, consider the whole of this channel in a state of malformation, and dread the consequences of the labor. But, in truth, this constriction is not general. The narrowness only exists at the orifice, while the vagina offers a normal capacity. This narrowness arises, then, from a kind of prolongation of the perineum, which shuts up, from below, a fourth, a third, and even one half, of the vaginal opening. In women thus arranged, we are obliged in the exploration of the internal organs to direct the finger in a line more or less oblique. And when introducing the speculum, we are constrained to give this instrument the same direction, instead of the horizontal, which accords with the ordinary state of the parts.

This vicious conformation induces many inconveniences; sometimes it is carried to such a degree, that the disappointed husband is compelled to ask the assistance of the surgeon before he can effect the entrance of the external orifice. The catamenia flow with difficulty, and accumulate in the receptacle formed by

the constriction. The same takes place with respect to leucorrhea, but it is during labor, or in the event of operations being required on the neck of the uterus, that this disposition is the most embarrassing. We may readily judge of the obstacles thus opposed to parturition. The head of the child experiences the utmost difficulty in passing the inferior strait. It arches against the perineum. It cannot be borne without lacerating, more or less, the vulvar orifice. Again, if the commissure be very resisting, the centre of the perineum yields and breaks, and the child escapes through the abnormal opening. I have no doubt that such has been the cause and progress of the perineal labors, the history of which I have related.

This conformation, again, may be either congenital or accidental — that is to say, it may be the result of a reunion of the soft parts after a burn, a previous laceration, or wounds of various kinds. It is evident that the only remedy consists in cutting the barrier to a certain extent, and taking the obvious steps to prevent its reunion during cicatrization. We should particularly have recourse to this measure in a first pregnancy, if the constriction come to our knowledge in time to form a solid cicatrix before confinement. We should not hesitate even to practise the division during labor, if we find that this process cannot be consummated otherwise, without a serious laceration or perforation of the perineum. Dr. Champenois relates in the fourth volume of the *Journal Gèn. de Mèdecine*, the case of a young woman in whom he prevented this accident, by dividing with a bistouri a hard, thick and callous circle, the result of a burn of the external parts of generation during early infancy. Dr Buet has inserted in the *Journ. Complementaire des Sciences Mèdicales*, a curious example of accidental constriction of the vulva. A young lady committed a little indiscretion, but, on the other hand, was strong enough and clever enough to conceal her pregnancy and lie in by herself. The labor was painful in the extreme, and occasioned immense lacerations of the labia and perineum. Reunion took place, but to such an extent, that there only remained a little orifice of the external part of generation, barely sufficient to permit the introduction of the little-finger. The young lady married. It was soon found necessary to call in a surgeon, whom she adroitly put in her confidence. Great was the joy of the husband, who regarded this organic disposition as the certain pledge of the virgin innocence of his beloved. The orifice was opened to a suitable extent, and means taken to prevent adhesion, and the desired cicatrization was soon complete.

Another cause, which must to a certain extent influence this rupture, and certainly does so when the contracted vulva is also present, is an improper position of the woman during labor. In fact, in the case described by Nedey, the midwife finding the

pains retarded, and the female pressed by a desire to use the *garde-robe*, constructed a kind of extempore night-chair, with a wooden chair turned on its side, and with a *pot-de chambre* between its legs. She then made the patient sit on this improvised construction, and on the second pain the infant began to cry under the chair. Our own patient was in an analogous posture, having been so elevated by pillows, that she was almost sitting. In this state the child's head, pressed downwards and backwards by the arch of the pubis, must bear the more strongly on the perineum. Experience moreover, proves, that in females placed altogether horizontally, the head presents itself much better at the inferior opening of the vagina. To the preceding causes, we may add, with M. Moreau, a too great curvature backwards of the inferior extremity of the sacrum and coccyx, or, what amounts to the same thing, an excessive projection of the sacro-vertebral angle. This vicious conformation in increasing the coccycopubien diameter of the perineal opening, in bringing more downwards and backwards the axis of this opening, in diminishing the inclination of the plain which should direct the head of the child from behind forwards under the symphysis of the pubis, compels the head to remain longer on the perineum, and directs it thereon with more force and perpendicularity. Lastly, there are doubtless, many other causes connected with faulty dispositions of the pelvis, or unusual positions of the child's head, to which we might, *a priori* assign the production of this laceration, but it is much better to reason only after facts; and, it is much to be regretted, that the authors of the numerous cases I have cited, have not transmitted to us all the circumstances relative to the child and mother.

We come now to the point most specially concerning us here, namely, the mode of remedying these accidents. In the patient now in the hospital, an attempt at reunion was made by the quill suture, but without success, doubtless because it was too soon removed. You will remark, that it was only applied the tenth day. Now in recent wounds methodical reunion may take place in four or five days, but in suppurating wounds, much longer time is required; least, till the suppuration has much diminished, or the granulations are suitably developed; in a wound of this kind, particularly, which is constantly irritated by the lochial discharge, the adhesion must be proportionably postponed. I have often had occasion to employ the suture in suppurating wounds, which are, as I have stated, much more slowly in uniting than recent wounds. Divisions of the perineum after accouchment, are especially tardy. I was called a good many years since by M. Gardieu, to see a young woman who was secretly confined out of her father's house. The delivery had terminated by a complete rupture of the perineum, from the commissure to the anus, and involving an inch of the anterior wall of the rectum. Several days having elapsed since the accident, I advised and practised the interrupt-

ed suture; I now, however, prefer the quill suture. In a month the young lady was about to return home, before the union was perfect. It had been opposed by a stubborn suppuration. The suture never having been removed, and the included flesh not having been divided thereby, I advised it to be allowed to remain, persuaded fully that reunion would take place. My advice was followed, and for the time I heard no more of the matter. Three or four years after a man and a woman one day entered my closet, when the female held back, and made me a sign as if to invite me to prudence and reserve. The unhappy husband, unable to consummate the marriage, informed me of his anxiety to learn to which of the parties the fault appertained. On inspection of the lady, I found the aperture of the vagina very narrow, situated high towards the pubis, and unusually forward. Behind was the perineum, marked with a long and strong cicatrix. I advised the husband to try what he could do once more, and it seems that he had at length the good fortune to be successful, for his wife became pregnant, and was confined without laceration. You may all guess that this young lady was my old patient.

TREATMENT OF THE PRESENT CASE.

In the case before us, then, what were we to do? Were we to leave things to themselves, or bring the wound into better contact, and apply the suture? Was it necessary to cut the fleshy bridge between the wound and the vagina? Before deciding on any of these questions we had the patient laid on her back, the thighs strongly brought together by bandages, and she was expressly recommended not to quit this position. For ten days that she has been in the wards we have already remarked a sensible diminution in the diameter of the abnormal opening, and the edges of the wound are uniting in several points. We are entitled, then, to hope that a cure will take place without any operation.

[The patient has recently quitted the Hôtel Dieu, completely cured. On the day after her dismissal, M. Dupuytren again briefly noticed the case as follows:—"The entire surface of the perineum has become cicatrized. Some minute divisions between the vagina and perineum still remain open, but these will doubtless quickly disappear. Here, then, is a case which confirms what different authors have adduced on the possibility of curing these solutions of continuity without operation. For the future the fact cannot be contested. The duration of treatment here, has been about six weeks, as in other cases I have quoted. In conclusion, I have recommended this woman to fatigue herself as little as possible; not to walk much, to avoid coition above all things, in short to do nothing which could endanger the solidity of the new adhesions. She has also been requested to return occasionally, especially if she again become pregnant."]

Dupuytren's Lecture.

Electro-Puncturation.

We have been asked repeatedly, what is the simplest method of applying Galvanism, as a remedial agent, in country practice? To this query, we now reply as follows. Any individual who can procure one or two large sheets of zinc, and as many of copper, may, in a few hours prepare a voltaic pile, sufficiently powerful for medical use, in most cases. In lieu of the sheet zinc, the spelter of commerce may be had easily and moulded to any form or size; and as the plates thus prepared, can be cast much thicker than the sheet zinc, they will be more durable. It is usual in forming the pile, to make the plates circular, but this is unnecessary, being a waste of time and materials. Let the plate be cut about six inches square, to the number of 40 for each metal; the parts will require as many pieces of woollen cloth, and green baize will answer very well.

The frame for the pile is differently constructed by different manipulators. Sometimes a flat piece of wood, of an area somewhat larger than the plates, is furnished with three glass rods, to keep the plates in their proper place. In lieu of the glass, wooden rods are employed, being first baked and then well varnished. But from some experience in the use of the pile, I know that with a little care, a very simple arrangement is sufficient. Let a piece of two inch pine plank be cut square, so as to project two inches beyond the plates, on either side. Then fasten into the plank three wooden rods, a half inch thick and about eighteen inches long, for the purpose of keeping the pile in place when it is formed. Let a piece of inch board, as large in the square as the piece of plank be provided with holes bored in it, so as to slip on the rods, and to constitute a kind of lid or cover to the pile. The wood work is then to be well varnished, three or four times. When the pile is to be set, let the woollen pieces be soaked in a solution of blue vitriol (one ounce to a pint of water) to which, if necessary, to increase the action, a few drachms of nitric or sulphuric acid may be added. Then lay down a copper and zinc plate, and on the zinc, a piece of the cloth made nearly dry by squeezing out the liquid; then copper zinc and cloth, and so on till all the plates are arranged in this order. When completed, the zinc will be uppermost and the copper below. Action speedily commences, and by having an iron wire attached to the upper and another to the lower plate, by means of a small hole, the galvanic influence can be carried to any part of the body. The wires constitute the poles of the battery, and if the end of one be applied to the cheek, and the end of the other be brought against the skin in the vicinity, a shock will be instantly felt. It is necessary to be particular in squeezing the cloths nearly dry, because the fluid is a conductor and will carry off a large portion of the

galvanic electricity. If any of the liquid fall on the wood, it should be immediately wiped off, so as to keep the instrument as dry as practicable. A pile, thus arranged, will be sufficiently active for nearly an hour, and when about to be laid aside, the plates should be put into water and well cleansed.

To illustrate the mode of using this remedy, and at the same time to set forth its utility, the following case, abridged from the London Lancet, will be found to be in point. It is called a case of *Electro-puncturation*, because the puncture by needles, was combined with the galvanic electricity.

"A patient, aged 56, had long been afflicted with rheumatism, to which dyspepsia, hæmoptysis and ædematous swelling of the legs, were, after a time, superadded. The secretion of urine was scanty, and cough with dryness of the throat, rather troublesome. Digitalis, calomel, squill, &c. failed to have the desired effect; and at length, general dropsy supervened. The paracentesis was proposed, but objected to by the patient. Dr Kœnig then advised the electro-puncture, which was performed as follows: — Two needles were plunged into the skin of the abdomen, about an inch on either side of the linea alba; they were moistened with salt water, and brought in contact with the poles of a galvanic battery. At the moment of contact, the patient felt a very severe pain, and the abdominal muscles strongly contracted. The pain, however, was transient, and left only a slight burning sensation. The needles were touched three times a day in this manner, from twenty to thirty times, and their number subsequently augmented. The urine was soon secreted in larger quantity, the skin became soft and moist, and digestion was improved. In four weeks after the first application of galvanism, the œdema was scarcely perceptible, and in a short time, all the symptoms of disease vanished. During this treatment, no internal remedy was administered, but a weak infusion of juniper berries."—*West. Med. Gaz.*

Poisonous Changes in Bread and Meat.

The third paper, one of singular interest and importance, is by M. Chevallier, and discusses the poisonous changes which occasionally take place in meat, and the accidents thereby produced. The subject is of so much consequence, that we are induced to subjoin a version of the whole of the author's observations

"I have repeatedly published, in the *Journal de Chimie Medicale*, examples of the ill consequences frequently produced by the consumption of different kinds of meat which have undergone a peculiar decomposition. Convinced that these accidents, though far from being rare, are nevertheless, comparatively little attended to, owing perhaps principally to the ignorance of the

persons who are generally attacked, I have thought it desirable again to revert to the subject. Moreover, during the recent epidemic, two families have suffered from this description of poisoning. The obnoxious alteration again chiefly affects pork, the consumption of which meat amounts in Paris alone to above eight millions of pounds annually.

The first set of cases alluded to were those of M. * * *, doctor of medicine, his wife, daughter, and servant. Another case occurred in the practice of M. Brichettau, who, on the 27th of August, was called to see a woman aged about 40, who, during the day, had eaten some slices of bacon purchased from a pork-butcher in the neighborhood. She had suffered from vomiting for several hours. The abdomen was excessively tender. She had frequent stools, with tenesmus, and she complained of general pain. Cataplasms were applied to the abdomen, and she was ordered lavements, diluent drinks, and absolute diet. Notwithstanding this treatment, the patient had that night above fifty stools, and the abdominal pains continued very severe. Leeches were consequently applied, a warm bath ordered, and the previous treatment continued. In two days the patient recovered. These symptoms at such a time might have readily been attributed to other causes, had not a young woman, who had eaten a very small morsel of the same meat, experienced analogous accidents. And it further appeared that a third person had been very ill after eating pork purchased at the same time and place.

" On the 30th of May, 1832, we were directed to institute an official inquiry respecting an occurrence of the same nature, and which gave rise to the subjoined report :—

" We, J. Durocher, M. D., J. L. Geeury, M. D., and J. B. Chevallier, chemist, &c., having been directed by the commissary of police to examine a quantity of pork sold by the Sieur L. to a female, who after its use had been affected with vomiting, hypercatharsis, &c. ; before proceeding to the examination of the meat, we visited the establishment of the Sieur L., for the purpose of ascertaining whether, if among the meat exposed to sale, there was any of bad quality, or partially altered, or any of the same kind supposed to have occasioned the accident in question. We also were anxious to know if the cooking utensils and other vessels were in proper order. We found, accordingly, a dish of pork clippings of disagreeable appearance, and covered with mould, and we observed a vessel of hammered iron used for heating sauces, and the filth of which was absolutely disgusting. The other vessels were also far from being kept with the necessary degree of cleanliness, but they were not dangerous in the least as far as regards *impregnations of copper.*

Examination of the Meat.

" The meat, a part of which had occasioned the illness of the

female, was composed of several pieces cut from a lump of a preparation known in the pork trade by the name of *Italian cheese*, made of mixed fragments, strongly seasoned, and converted into a kind of compact pie, which is sold in slices. The pieces we examined were covered, some with blue and others with green mould, the latter circumstance occasioning a coppery appearance. Having divided a portion into three parts, one was treated with distilled water, and the solution tested by reagents, which proved the absence of any poisonous metal. Another part was treated with distilled water acidulated with nitric acid ; the solution thus obtained was evaporated, the residuum redissolved in water, and tested by reagents, which, as before, gave no indication of any known poison. The last part of the meat was introduced into a new crucible, carbonized and incinerated. The ashes did not contain the least trace of copper. The same experiments repeated on the meat found at the shop of the Sieur L., were attended with the same negative results. From these facts, it follows that the meat in question contained no copper, but that it had undergone a marked alteration capable of producing the accidents in question ; nor is this the first example of poisoning by this particular substance. Dr Paulus, of Saltz, has already related the history of seven persons who became violently ill after eating *Italian cheese*, and of whom three died. In 1824, a family named Plagneard at Paris, were also very dangerously affected after partaking of a ham pie which contained no metallic poison, but in which the alteration in question had commenced. — *A. Chevallier.*"

The following report bears great analogy to the preceding. It is drawn up by M M. Lecanu, Labarraque, and Demorliere, who were directed to examine the remains of a pie which had occasioned the serious illness of eight persons.

" The remains we had to examine were wrapped up in paper ; they chiefly consisted of the under and side crusts of the pie, along with a small quantity of a mixture of veal and ham. From the smell of the pie and the mould with which it was covered, considerable decomposition had evidently taken place. The experiments instituted were chiefly devised for the detection of arsenic or copper. For this purpose a certain quantity of the remains of the pie was treated by boiling in distilled water. The liquor filtered through paper previously steeped in water, in order to prevent the passage of any fatty matters, was almost colorless, and reddened litmus paper strongly. It was not disturbed by limewater or ferro-prussiate of potash. The hydro-sulphuret of ammonia, after the addition of a few drops of acid, occasioned a slight haze dependent on the separation of a little sulphur, and quite different from the yellow sulphuret of arsenic. The ammoniacal sulphate of copper produced a sufficiently abundant greenish flaky precipitate, soluble in excess of ammonia, but which,

calcined in a tube after being mixed with caustic potash and charcoal, gave no trace of any metallic substance, proving that the precipitate depended on some other cause than the presence of arsenic. It proceeded, as one of us has already several times had occasion to ascertain from the presence in the tested liquor, of a minute quantity of starch. Indeed by boiling distilled water on fecula, a fluid is obtained which acts with this test precisely in the same manner.

" Another part of the pie was calcined in a Hessian crucible, and the residue treated with nitric acid. The fluid evaporated to dryness, and, redissolved in water, afforded no trace of copper with the most sensible reagents, such as ammonia and the sulphate of copper. We agree, therefore, in stating that the accidents oscasioned are not at all attributable to the presence of copper, arsenic, or any other metallic poison, and that they were solely occasioned by an incipient decomposition of the pie, which had been kept too long in a warm place.—*Labaraque, Demorliere, Lecanu.*"

About two years since a case of poisoning by mouldy bread happened at Hammersmith, in the family of the beadle of that parish. His wife purchased in the morning a loaf of bread, of which she ate a slice at breakfast. Her son, 20 years of age, ate two slices of the same bread toasted; almost immediately after the meal, both became unwell, and diarrhœa, vomiting, and tenderness of the abdomen, supervened, and several hours elapsed before these symptoms abated. The loaf, a considerable portion of which we obtained, was of yellowish color. Though baked that morning, and heated for the ordinary length of time, it was sprinkled over with minute fungiform vegetations, the greater number of which were black, a few green, and several yellow. It was soft, wet, inelastic, and so tough, that it could be drawn into strings. Its taste was unpleasant, its smell acrid, and it reddened litmus paper when laid upon it. Submitted to a process much more comprehensive than that pursued by the French chemists, the absence of all recognisable poisons, whether mineral or vegetable, was fully ascertaind. In the course of the necessary analysis, the circumstances alluded to by M. Lecanu was remarked, namely, that starch afforded a precipitate with the ammoniaco-sulphate of copper, not unlike that occasioned by arsenic; and on examining the nature of the precipitate, it was found that the ammonia alone produced it. Finally, a piece of the bread occasioned analogous symptoms in a dog and cat to those the man and woman suffered from. Sufficient evidence was thus obtained to fix the cause of the accidents on the bread. But the question then arose, Was it the minute fungi constituting the mould which acted as the poison in the manner of other poisonous mushrooms? or, on the other hand, Was it the paste itself, which from decomposition had contracted dele-

terious qualities? The following facts seemed to establish the latter supposition: — Having collected a considerable quantity of the mould (about five grains), it was eaten by a person ætat. 22, without the slightest ill consequence, while a small bit of the bread from which the fungi had been separated gave rise to colic pains and tendency to diarrhœa. Further evidence to the same effect was obtained soon after in the following manner :— A quantity of dough was allowed to become mouldy in a moist place. The mould was then carefully removed, and the dough baked into a small loaf. The loaf thus formed had precisely the same physical and poisonous qualities as the Hammersmith bread, while the mould was eaten by a cat, a dog, and by the experimentalist, with perfect impunity. On analysis of the bread, it was found to contain the due proportion of starch, amidine, sugar, and earthy substances, but the gluten had undergone a marked alteration in its proportions.

These data may, perhaps, be of use to future experimentalists on this interesting subject.

The Luxury of Bathing.

The following is the description of a *Salle de bains*, which has recently been fitted up in the residence of a wealthy Parisian banker, at the expense, it is said, of thirty thousand francs. The walls are painted in fresco, on a stucco ground, and represent the interiors of Turkish baths. The artist by whom these paintings have been executed, has apparently been initiated in all the mysteries of oriental luxury. Young and graceful female forms are represented, enveloped in silky and transparent draperies; and all the ornaments of the harem toilette are profusely collected around the coquettish odalisques. The bath, which is of white marble, is fixed in a recess, representing a grotto, carpetted with verdure and flowers. In the centre is a fountain, emitting, through a cluster of shrubs, a two fold spring of warm and cold water. The floor is covered with Brazilian mats. From the centre of the arched roof, which, like the walls, is painted in fresco, hangs an alabaster lamp, suspended by gold chains. A window, consisting of one single pane of glass, of vast size, is shaded by a clear muslin edged with a rich bordering of foliage, embroidered in green worsted. This window, which is hung on hinges, like a door, opens upon a conservatory, which leads to a boudoir. The latter apartment is lined with Persian draperies, and furnished with sofas, ottomans and toilettes, with elegant services of blue and gilt porcelain. The chimney is of stucco, and the mantel-piece is adorned with a time-piece of black marble, and two black marble vases supported on pedestals of gold.

Inflammatory Piles.

There was likewise presented a case of inflammatory piles which occurred in a young man. The symptoms were a swelling around the anus, accompanied by great pain. It was presently cured by keeping him in the horizontal posture, the application of leeches, cold, and alum water. I think, that of all local applications in hæmorrhoids, nothing answers so well as alum. Of course when there is inflammation or great congestion, leeches are required: I think, as I have just said, that alum answers better than anything else, as a wash. Of course it is necessary to keep the bowels open, but it is very requisite to exercise care in not doing too much. If you give strong purgatives, you will make the matter ten times worse. Constipation ought to be avoided, because hard fæces necessarily irritate and cause great congestion of all the vessels, and therefore must increase the complaint. But, on the other hand, if you irritate the part too much by purging, you will have the bowels pressed down by the mere irritation; you will have the mucous membrane very much relaxed, and do as much mischief in this way as if there were constipation. Aperients are very proper, but purgatives are generally injurious, that is to say, the patient's motions should both pass through the rectum with as little effort as possible, and with as little irritation and relaxation of the parts as possible. Either extreme is most injurious. I have known many people have a fit of piles brought on by taking strong purgatives, and on the other hand you will see it occur every day by allowing the bowels to become costive. Of course, whether there be straining from diarrhœa or constipation, it matters not, the effect being the same. — *Lancet.*

Speedy Production of Salivation.

It really would appear from the tenor of recent reports to the Central Board of Health, that the experience of our Indian brethren, who have treated cholera in its native soil, ought not to be so much disregarded as the practitioners of Europe have seemed disposed to do. They (the former) have told us that bleeding and calomel, combined with opium, enabled them to save a much greater proportion of cases than has as yet rewarded the innovations of Europe; and recent reports to the Board the writer has now the honor to address, which intimate a tendency to return to this practice, seem to support the alleged great utility of the Asiatic method. Many years ago, when the undersigned had some thoughts of proceeding to India to pursue his

profession, and when his head was of course full of tropical diseases, and of plans for their cure, he happened to witness a case of rapid salivation by an unusual method of introducing mercury into the system; and it occurred to him that if salivation was such a sovereign remedy in most tropical diseases as it was reported to be, and if the method of introducing the medicine into the body which he had witnessed in Scotland was to be as speedy in its effects in India as it was in a colder climate, then a very valuable resource might possibly be found, in adopting that method in the treatment of these very rapid and malignant distempers. Under this impression the writer drew up a short paper on the subject, and transmitted it to his late lamented friend Dr Andrew Duncan, jun., who was at that time (1819) editor of the "Edinburgh Medical and Surgical Journal," and who did him the honor of inserting it in that most respectable periodical.*

The plan consists in scarifying with a lancet some portion of the surface of the body, and sprinkling upon the wounded surface a small portion (finely levigated) of the powder of corrosive sublimate. A considerable degree of local irritation ensues upon this operation, and in the case the undersigned had an opportunity of seeing a very rapid mercurial effect was produced upon the constitution. The gums became intensely sore, and salivation was established in less than twelve hours after the powder had been applied.

The writer of this is well aware that the result of a single case is not much to be depended upon; and that even were it established, salivation might generally be produced in this way on ordinary occasions; yet in the new and strange circumstances under which cholera places the human constitution, where the powers of life, that of absorption among the rest, are so signally depressed as to be suddenly almost annihilated by some subtile aërial poison, the chances are that no mercurial effect would be produced by the plan now suggested. All this may be very true, yet the undersigned still thinks the plan deserves a fair trial by those who may have great opportunities of using it; and he does not think that he would have been justified in entirely suppressing what he has thought of on this subject, while we are still laboring under the effects and the fear of a pestilence which seems hitherto to have set all human efforts to arrest and cure it, very much at naught. W. Maclure.

* Vol. XV, page 46, 1819.

Hemorrhage from Leech-Bites.

In a case of hydrocele, in which Mr Brodie ordered leeches to be applied to the scrotum the day after the tunica vaginalis had been injected, Dr Hamson stepped forward, and asked Mr Brodie whether he had never seen cases in which "alarming hemorrhage" *(totidem verbis)* had ensued from leech-bites. "No," answered Mr Brodie, "I have never seen anything half so alarming as you would imply. If I cannot restrain the bleeding by ordinary means, I generally use Raspini's styptic, which I find to be a most valuable medicine. I remember once meeting with a case in which a leech had fastened upon one of the superficial arteries of the abdomen, and nothing would restrain the hemorrhage, and I was obliged to take the artery up with a tenaculum. This is, however, the only severe case of the kind I ever remember to have met with."

Dysentery.

There were two other cases presented, one of dysentery and one of rheumatism. The one of dysentery was a very slight case, and yielded to the exhibition of sulphate of copper, the other was a case of rheumatism which yielded to acupuncture.

Respecting the case of dysentery I can only say, that the man had been in hot countries, in the East Indies, and had fever and flux there, many years ago. From catching cold, the dysentery now returned. If a person has once suffered severely in a hot country, or in an aguish country, either from ague or abdominal disease and particularly dysenteric affection, when he catches cold he is very liable to a return of these complaints. The case was dysentery as shown by the following circumstances. There were frequent stools with a bearing down, tenesmus, severe griping, and a discharge of mucus rather than of fœces.

Treatment.—If there had been inflammation present I should have bled him, cupped him, or applied leeches, and have blistered him; but there was no pain on pressure, no sign of inflammation, therefore I gave him an astringent, without any ceremony. That astringent consisted of half a grain of sulphate of copper every six hours, and under this the disease was soon checked, and he presently got well; so that having been admitted on the 4th of October, after being here a fortnight, he was discharged perfectly well, and had been so a week.— *Elliotson's Lecture.*

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I. — TRANSACTIONS OF LEARNED SOCIETIES.

IT is our intention, under this head, to present our readers, from time to time, with the proceedings of some of the most distinguished medical and scientific associations of Europe. There can be no fairer indication of the state of medical science and its collateral branches of study in the different countries where these institutions are in operation, than that contained in their own doings; and, at the same time, we are kept *au courant* with the most important researches and the most interesting discoveries of the day. In the compiled abstracts of the reports which we propose to make, we shall confine ourselves, for the most part, to such subjects as come within our appropriate sphere as conductors of a *Medical* Journal. We believe, however, that occasional, brief notices of matters not strictly medical, so far as they are illustrative of the character of the bodies in which they are discussed, and indicative of the spirit and feeling of the times, will be read with pleasure. Besides the benefit to be derived from the subjects themselves, we also become more acquainted with those celebrated men to whose familiar deliberations we are thus admitted. If an American physician or man of science had but four hours to pass in Paris, would he not repair to the Palace of the Institute at three o'clock on the afternoon of Monday, where he might hear, perhaps, the most recent discovery in chemistry announced from the lips of GAY, LUSSAC, VAUQUELIN, or THENARD, or listen to a discussion between the Barons BOYER, LARREY, and DU-

PUYTREN? In such gratification, indeed, few of us can be indulged; but next to the profit and pleasure of this personal intercourse is a knowledge of what is said and done at these familiar but august assemblies of the veteran votaries of science.

We shall confine ourselves to the proceedings of the *Académie des Sciences* of the French Institute and the *Académie des Medecine.* Paris is the seat of both these institutions, and we have no means, at present, of extending our notices to any others. We take this occasion to say, that, since the establishment of the *Magazine*, thus far, we have been obliged to depend, for the most part, upon second-hand sources for our foreign intelligence. The deficiencies in our foreign exchanges are yet but partially filled up, though we hope soon to have a regular supply of the most approved and popular European journals.

The National Institute was founded soon after the revolution. Several academies of learning and the arts which had perished in that fiery simoom of political fanaticism were restored and modified and united under the name of the National Institute. The oldest of these was the *French Academy*, founded by Cardinal Richelieu. The Institute has been variously modified under the successive governments since its establishment, though it has always retained the same general character and organization. The number of its associates is limited, and nothing but the most extensive attainment, the most valuable services or brilliant discovery, can win that peerless badge of scientific distinction bestowed by its membership. In 1816, by a royal ordinance, the Institute was composed of the *French Academy;* the *Academy of Inscriptions and Belles-Lettres;* the *Academy of Sciences;* and the *Academy of Fine Arts.* These different bodies are divided into several sections. The *Academy of Sciences,* — the only one which directly concerns us, — consists of eleven sections. We give its composition as it stood in 1827.

Section 1. — GEOMETRY.

La Place,	Biot,
Legendre,	Poinsot,
Lacroix,	Ampère.

Section 2. — MECHANICS.

De Prony,	Cauchy,
Sané,	Dupin,
Molard,	Navier.

Section 3. — Astronomy.

Cassini, Arago,
Lefrancais-Delaland, Matthieu,
Bouvard, De Damoiseau.

Section 4. — Geography and Navigation.

Beautems,—Beaupre,—Derossel,—De Freycinet.

Section 5. — General Physics.

Lefevre-Gineau, Girard,
Gay-Lussac, Dulong,
Poisson, Fresnel.

Section 6. — Chemistry.

Vauquelin, Thenard,
Deyeux, Proust,
Chaptal, Darcet.

Section 7. — Mineralogy.

Lelièvre, Brochant-Devilliers,
Ramond, Cordier,
Brongniart, Beudant.

Section 8. — Botany.

De Jussieu, Labillardière,
De Lamarck, Mirbel,
Desfontaines, Dupetil-Thouars.

Section 9. — Rural Economy.

Tessier, Bosc,
Huzard, Morel de Vindé,
Silvestre, Yvart.

Section 10. —Anatomy and Zoology.

Geoffroy St Hilaire, Savigny,
Ducrotay de Blainville, Latrielle,
Dumeril.

Section 11. — Medicine and Surgery.

Portal, Chaussier,
Pelletan, Boyer,
Magendie, Dupuytren.

Perpetual Secretaries — Cuvier and Fourrier.

The principal changes which have occurred since 1827 consist in the removal of members by death, and the election of others to supply the vacancies thus created. Among the most distinguished of those who have been thus removed within a few years are Chaussier, who died in 1828, the Marquis De La Place in 1827, and Cuvier, Count Chaptal and Portal in 1832.

The *Royal Academie of Medecine* was instituted especially to reply to the demands of the government in relation to all subjects interesting the public health; such as epidemics, epizooties, cases of legal medicine, the propagation of vaccination, the examination of new and secret remedies, of natural and artificial mineral waters, &c. It is also charged with the continuation of the labors of the ancient Society of Medicine and the Academy of Surgery. We shall go back with the commencement of the reports to July, 1832, the time of the establishment of the Magazine.

Academy of Sciences of the Institute.

Session of July 2, 1832.—M. Pelletier exhibited the principal results of his researches on the composition of opium. It is nearly fifteen years since this substance was analysed by M. Robiquet. Numerous discoveries and improvements have been made in vegetable chemistry since that time. The most important result of M. Pelletier's analysis is the discovery of a constituent element, hitherto unknown, to which he has given the name of *Narcéine*. This is a white, crystalline substance, slightly bitter, soluble in alcohol and water. It is more soluble in hot water than in cold, is not volatile, and crystallizes on cooling. In combination with acids it assumes a very beautiful blue color, and is not decomposed, if the acids are not too much concentrated. Referred to a committee consisting of Gay-Lussac and Chevreul.

M. Guerry presented to the Academy an essay on the *moral statistics of France*, which abounds with curious and important facts in relation to the subject of which it treats. Referred to Lacroix, Silvestre and Gerard.

Session of July 9.—A letter was received from M. Despretz, on the maximum density of sea-water.

The Academy then proceeded to the election of a perpetual secretary for the class of the physical sciences, to supply the vacancy occasioned by the death of Cuvier. On the first ballot, of 45 votes, M. Dulong received 20, M. Flourens 11, Geoffroy St Hilaire 7, M. Beudant 5, and Dumeril 1. At the second ballot M. Dulong had 30 votes, and was declared elected.

The Academy also designated by ballot a candidate for the chair of comparative anatomy at the *Jardin du Roy*, made vacant by the decease of Cuvier.—M. de Blainville was chosen.

Session of July 9.—M. Guibert presented a memoir on the treatment of the epidemic cholera. Several other documents were received in relation to the same disease.

M. Benoiston de Châteauneuf presented a voluminous memoir on the mortality of the French army. M. Corbaix forwarded a work on the laws of population, life and mortality. Both these authors are candidates for the prize of statistics.

M. Dumeril made a report on a manuscript work of Dr Breschet, entitled *Anatomical, physiological and pathological studies of the human ovum.* M. Flourens read a memoir on the symmetry of the vital organs, considered in the animal series. M. Brière de Boismont addressed a letter to the Academy on the danger of precipitate interments. The Minister of Commerce and of Public Works transmitted a communication declaring the election of M. de Blainville, at the last session, illegal, for want of an absolute majority of votes. After some explanations by M. Arrago, the election was confirmed.

M. Ségalas exhibited an instrument accompanied by a letter explanatory of its object and application. It sometimes happens that bougies and sounds of gum elastic, left in the urethra during the treatment of various diseases of the urinary organs, become displaced and find their way into the bladder. In these instances the resources of lithotrity are unavailing, and the foreign body can be removed only by lithotomy. A skilful operator of Bordeaux, assisted by several surgeons, has lately failed in the attempt to extract a sound from the bladder with the *litholabe* — a kind of forceps with three branches or blades contrived for this purpose. The man was subjected to the operation of lithotomy. The instrument of M. Ségalas consists of a forceps or pincers with two blades, thin, narrow, and slightly bent at their extremities. These are lodged in a canula, having the form of a sound, a little flattened, and serving at the same time as a conductor and a constrictor of the pincers. The forceps are drawn into the canula so as to make their blades close upon each other or upon the foreign body, by means of a vice, so that the motion is strong and uniform. The sound or bougie being seized at any portion of its length, indifferently, by the pincers, is thus drawn, double or folded upon itself, within the canula, and wholly extracted through it, or the entire apparatus is withdrawn together. Numerous experiments made

by M. S. on the dead body have convinced him, that in most cases, his instrument may be successfully applied to the purpose for which it is intended.

Session of July 23.—The Minister of Commerce and of Public Works transmitted a box containing a mineral discovered in Landes, with the request that it should be analysed. Committed to Lelièvre and Berthier.

Dr Philippis, sent by the King of Naples to investigate the cholera at Paris, proposed to the Academy the external use of *mercurial ointment*, in friction, as a remedy in the collapsed stage of cholera. Several other papers were presented relating to this disease, both at this and at the succeeding session. We pass them by without further notice, alluding merely to one by M. Boubée on the geological march of the cholera. He endeavors to show, by an appeal to the geographical progress of this epidemic, that those countries and localities where the tertiary or alluvial formations predominate have suffered most severely and uniformly from the ravages of the malady, while it has been comparatively less common and malignant upon the ancient or primary formations.

Academy of Medicine.

Session of July 3, 1832. — *Rabies.* The following case was reported by Pergaud and Dumont, physicians of Arbois. A young girl, Theresa Turpin, aged 19 years, was bitten by a mad wolf on the neck, cheek, and right eye-lids. The wound of the lid was washed with a solution of chlorine, and touched with nitrate of silver, the two others with the actual cautery. A month afterwards, she became dispirited and dreamy; was attacked with rigors which were followed by fever, convulsions and death. On examining the body, the arachnoid was found slightly inflamed with softening of the substance of the cerebrum and cerebellum. Did this girl die with *rabies?* M. Pergaud replies in the negative, because there was no *hydrophobia, frothy saliva, or redness of the cicatrices.* M. Dumont, notwithstanding the absence of these symptoms, replies affirmatively. It was ascertained by the committee to whom the case was referred, that four other persons, bitten by the same animal, have all fallen victims to rabies — one of them 84 days after the wound was received. An ox was also bitten, and although the four wounds were profoundly cauterised, he was attacked with the disease. The Academy replied to the minister that the cause of Theresa Turpin's death was, evidently, rabies.

Cholera.—M. Castel called the attention of the Academy to a peculiarity in regard to the cholera which was also observable in epidemics generally. He alluded to the circumstance that men were more liable to its attacks than women. An animated debate followed this observation. M. Roux cited facts which had come under his own notice in direct opposition to the statement of M. Castel. According to M. Gueneau de Mussy the returns of the hospitals exhibited results in regard to the comparative liability of the sexes to the disease, somewhat singular. At the commencement of the epidemic there were three males attacked to one female. About the middle of April the number of female patients was greatest, while at present, they were about equally divided. M. Rochoux remarked that in all these statistics, there was nothing constant or regular, and that it was idle to attempt any explanation of facts, which, instead of being uniform and permanent, were dependent upon circumstances altogether transitory and fluctuating.

Session of July 10.—This and the following meetings were mostly occupied with discussions on the connexion of pregnancy with cholera, and urtication as a remedy in this disease.

Session of July 24.—The secretary having completed the reading of the correspondence, the death of the venerable Portal, honorary president of the Academy was announced, and the meeting was immediately dissolved. It is to Portal that the Academy of Medicine owes its existence. Honor to his memory! As long as he lived, he was one of its most active and assiduous members. It was delightful to see him, at that age when men generally feel so little interest in whatever does not directly and personally concern themselves, giving his earnest and regular attention to the discussions and deliberations of his young associates. M. Portal has bequeathed to the Academy two superb portraits which have hitherto ornamented his private cabinet, — one of the unfortunate Vesalius,* supposed to be

* Vesalius was one of the most learned physicians and excellent anatomists of the sixteenth century. He was born at Brussels in 1514. Having attained the summit of distinction in his profession, he was, in consequence of a singular occurrence, subjected to a series of reverses which terminated tragically enough in his death. He had been in attendance upon a Spanish gentleman, suffering with some disease which apparently proved mortal. Having obtained permission from the friends of the supposed defunct to examine the body, what was his astonishment, on opening the chest, to find the heart still palpitating! In consequence of this sad catastrophe, he was pursued not only as a murderer, but he was accused of impiety before the Inquisition. This remorseless tribunal would have inflicted upon him its summary and vindictive punishment, had it not been for the friendly intervention of

from the pencil of Titian, and the other of Lasonne, physician to Louis XVI. Added to these is a legacy of 12,000 francs, the income of which is to be adjudged annually as a prize for the best treatise on medical or pathological anatomy.

Session of July 31.—A manuscript was read on the diseases of the encephalon. The most important passage is that in which the author asserts that there is no connexion between aneurism of the heart and apoplexy. To this it was replied, that the instances of this connexion had been too numerous and well established to admit the supposition of its being fortuitous merely. Cabanis died apoplectic, and he had disease of the heart. Fourcroy died under the same circumstances. Dionis published a little work, during the reign of Louis XIV. on sudden deaths, and almost always on examination there was found this complication. M. Pariset knew a man affected with disease of the heart, who felt a violent throbbing in the head, the shocks of which he compared to the blows of a hammer. He died with apoplexy. Nothing is more common than the coëxistence of scurvy, active aneurism of the heart, and apoplexy.

Philip II. King of Spain. The price of his escape was a pilgrimage to the Holy Land. He accordingly made the journey by way of Cyprus to Jerusalem. Soon after the death of the celebrated Fallopius, which occurred in 1564, Vesalius was invited by the Venetian Senate to fill his place On his way to Venice he was thrown, with the wreck of his vessel, upon the island of Zante, where, reduced to the last extremity, he died of hunger, in 1564.

Senac says of him, that he discovered a new world before he had attained the age of 28 years. What follows is the language of M. Portal himself, to whom we are also indebted for this note, thus far explanatory of the epithet, *unfortunate*, applied by the reporter to Vesalius. He had not reached the age of 25 years, when he published his work on the structure of the human body. This precocious production would be deemed fabulous, were not its authenticity too well attested to be doubted. That an author should excel in literature at this early age would not be remarkable, but that he should complete a system of anatomy so ample and so accurate, supposing such immense researches upon the dead body, and this too at a period when human dissection was regarded as sacrilege, is truly extraordinary. Vesalius seems to me one of the greatest men the world has ever produced. The astronomers may boast of their Copernicus, the natural philosophers of Galileo, Toricelli, &c. the mathematicians of Paschal, the geographers of Christopher Columbus,—still do I place Vesalius above all their heroes.

Art. II. — Life and Medical Opinions of John Armstrong, M. D.

Memoir of the Life and Medical Opinions of John Armstrong, M. D. formerly Physician to the Fever Institution of London; author of "Practical Illustrations of Typhus and Scarlet Fever," to which is added an inquiry into the facts connected with those forms of fever attributed to malaria or marsh effluvium. By Francis Boott, M. D., *Secretary of the Linnæan Society; honorary member of the Medical Society of Massachusetts. In two volumes. Vol. I.* London: Printed for Baldwin and Cradock, Paternoster-Row. 1833.

The author of this work is a native of our city — belongs to a family well known both here and elsewhere, in this country and in England. Though he has left us, and is now established as a physician in London, he is not forgotten among us. We have indeed watched all his movements with the lively interest which was inspired by the elevated and generous character of his mind and his heart. He left us about fifteen years since, already distinguished as a naturalist and as a scholar, at an age comparatively mature, to engage in his professional studies abroad. These studies he pursued under the direction of Dr Armstrong, in Paris, London and Edinburgh, in which last city he was graduated M. D. He was then induced, by the urgency of Dr Armstrong, to take up his residence in London, instead of going to an inland town, which his own modesty and perhaps his own taste had led him to select. Dr Armstrong felt that he had thus secured the aid of a friend worthy of himself; one, on whom he could rely for assistance in his multiplied engagements, and one, whose interest it might be in his power to promote. The death of Dr A. in a very few years after this arrangement was made, put an end to the grateful intercourse, which had thus begun between these two excellent men. This was the more to be regretted by the public, as these gentlemen were engaged in establishing a medical school in London, in which not only the medical sciences were successfully taught, but in which also the moral influence of their characters must have been most salutary. This little concerning our townsman, who has been advantageously known as a physician to many of our countrymen since his residence in London, we could not forbear saying at the outset.

The work before us is a memoir, first, of Dr A.'s life, and second, of his medical opinions, with a defence of them.

Dr Armstrong's life and character will bear to be faithfully delineated. In delineating them, Dr Boott shows the ardor of his attachment to his friend, for this he could not conceal, nor could he wish to do it. But this ardor has not blinded him, and he has told the story simply and faithfully. The reader perceives this at once from the internal evidence.

Dr Armstrong's parentage was respectable, but not distinguished. His education was sufficient to procure him the diploma of Doctor of Medicine at Edinburgh, but only sufficient; for, as happens to most of us in this country, he was compelled to engage at once in professional business for a living, without having availed himself of the many advantages for education, which his own country afforded. He commenced business in Sunderland, near the place of his birth, and there he soon inspired respect and interest in all around him. Like other beginners he had to take many things for granted; but so far as nature was presented to him he studied her with the delight and zeal, which are ever found in the wise and good. He was soon led to take new views of her ways, different from those which had been pointed out to him in the schools. Without thinking at first of becoming an author, he was induced to communicate his observations to the public in a medical journal; and his warm and earnest eloquence made his voice heard at once in his own country and abroad. We well remember how cordially his writings were greeted among us. His celebrity, particularly from his work on fever, soon opened the way for him to London, where he removed in 1818, when thirty-four years of age. There he was almost immediately appointed physician to the London Fever institution, and thus was enabled to pursue his favorite inquiries with increased advantages. Under these advantages he reviewed his opinions and found that some of them were not tenable. These he did not hesitate to abandon; for it was truth he loved.

That Dr A. discovered the whole truth, on the subjects which he particularly studied, is more than we are prepared to say. It is however certain that his opinions accorded with those, to which many physicians in this country had arrived, or were arriving, at the time when he wrote, although no one had come forward to give them so distinct a form, or to maintain them by so much evidence as he did. We refer, in these remarks, especially to his work on fever, though not solely to that. There was however one point, on which Dr A. differed from the great majority of physicians among us. He spoke of typhus, under

which name it was obvious he was treating of continued fever as it appeared in Great Britain, as a contagious disease. He had been taught that this disease was propagated by contagion, and many circumstances rendered this doctrine plausible. He seemed scarcely to have viewed the doctrine with sufficient doubt to be induced to examine it. But, after his more enlarged experience in London, especially that in the fever institution, he began to have doubts in regard to this doctrine. These doubts he did not put off to a more convenient season. He was too conscientious to hold to an error, although he was already committed in print. He examined the matter carefully until the end of his life, and he became every day more and more satisfied that the remote cause of fever is derived from the soil; that not only intermittents, but continued fevers are produced by malaria. To this conclusion, which may be modified by future discoveries, the whole world will, we are persuaded, ultimately become converts. And, if it be true, it is most important that the truth should be established. For, while it is believed that the material, or miasmata, which produce the disease, are derived from the sick, evils will continue to follow, not more injurious to the cause of humanity, than to that of true policy. In our country the great contest in respect to yellow fever has been decided by abundant experience. Very few physicians continue to believe that to be contagious. But, as regards what is called typhus, we are not so decided. And, no doubt, English authority has had great influence with us in maintaining a half-way faith, at least, in the contagious property of that disease. If, however, it can be shown, that, whatever difference there may be in these diseases, their origin is from the same general source, the fear of the contagion of typhus will be overcome. It is the aim of Dr Boott's book to decide this point.

Although Dr Armstrong renounced his early opinion without hesitation, as soon as he was satisfied that it was erroneous, and in his lectures after this time maintained that typhus was produced by some cause which originates in the soil, yet he never brought forward in his publications the whole evidence, on which his change of opinion was grounded. He seemed to reserve this as a task for his later years, or for a period of more leisure, when he might be sure of having given to the subject the most full and mature attention. These later years he was not destined to see, and his increasing engagements afforded no period of leisure. But the task thus postponed has been undertaken by his friend.

In order to decide the question before him, Dr Boott has carefully reviewed the various publications respecting the fevers of the United States, — publications scattered for the most part through our periodical works. The statement and examination of the evidence thus collected occupies the greater part of this first volume of his work. He proposes in a second volume to examine the fevers of Europe, and thinks that the evidence from that source will correspond with that from this country in supporting the opinions maintained by Dr Armstrong.

It is not our design to go into the examination of the materials thus brought before us. The work is now in the press here, and will shortly be placed before our professional brethren. We will only say that it seems to us to have been ably and faithfully executed. It relates to a question which every physician must be interested in deciding. We trust, therefore, that every one will carefully peruse and examine it, and compare its statements with his own personal observations.

In taking this brief notice of Dr Boott's work we have certainly been influenced by personal friendship. But we only fear that the consciousness of this has restrained the commendation, which we might otherwise have bestowed more freely. It is however true that we have also desired to bring before our brethren in this country a book, which discusses honestly a question most important in its bearings on the comfort and welfare of the community.

Art. III. — Climate.

[Concluded from p. 616.]

Of the Atlantic Islands, Madeira; in Italy, Rome and Pisa; and in England, Torquay and Undercliff, afford the best climates for consumptive cases.

In stating these places to be the most favorable residences, we beg to be understood as referring to the winter chiefly. Italy, during the summer, is decidedly injurious to the phthisical invalid; and those who have passed the winter in the milder climates of England should in general seek a more bracing air in summer, such as that of Malvern, or even some of the more elevated and drier districts of our island; or, what would be still better, they might in the course of this season change from

one place to another, taking care always that no place was visited possessing a climate decidedly hostile to their particular state of health. Such frequent changes of residence, when judiciously conducted, and combined with exercise on horseback, and a regimen suited to the particular state of the patient, are among the most effectual means which we possess for preventing consumption in persons predisposed to it, more especially in early life.

Chronic bronchitis.—The morbid conditions of the mucous lining of the larynx, trachea, and bronchi are greatly influenced by climate, and the change from a cold and moist to a mild and dry air seldom fails to relieve, and occasionally removes them. The situations which have been mentioned as most favorable in phthisis are best suited also to bronchial diseases generally. Of the continental climates, those of Rome and Pisa are the most beneficial in cases attended with an irritable state of the affected parts without much secretion; and that of Nice in cases attended with less sensibility, a more copious expectoration, and a relaxed state of the system generally. Madeira, as far as our experience goes, has proved more beneficial in the former class of cases than in the latter. In England, Torquay and Undercliff afford the best climates in the first class of cases, and Clifton in the latter, in which Brighton also is a very favorable residence during the autumn.

Asthma is often greatly relieved and occasionally ceases under the influence of a mild climate, more especially when complicated with disease of the bronchial membrane, as it almost always is when of some duration. In what has been termed humoral asthma, Nice is the best residence; but Rome is preferable when this disease is accompanied with an irritated state of the digestive organs, a complication which is exceedingly common.

Chronic rheumatism.—Climate produces the most decidedly beneficial effects in this disease, and that often with surprising rapidity, even in cases of long standing, which have resisted the best directed medical treatment. We would particularize Rome and Nice as the best residences for invalids suffering from this complaint. The preference to be accorded to the one or the other place will depend upon the character of the patient's constitution and the state of his digestive organs. When there exists an irritable state of these, we have already remarked that the climate of Nice will generally disagree, whatever may be the more prominent disease.

Gout is remarkably alleviated by a warm climate. In the selection of a residence for the gouty invalid, we must be guided by the particular state of his constitution, and the effects of the different climates which have been already pointed out. Genoa is rather remarkable for the rare occurrence of the disease among its inhabitants. But a warmer climate than any part of Italy would in many cases, we have no doubt, prove still more effectual in removing gout. We have already remarked the effects of the West-Indian climate in this disease.

Scrofula. — Strumous affections, especially when seated in the skin and lymphatic glands, are frequently cured, and the general health is greatly improved by a mild climate. In such cases Nice and Rome have appeared to us the most favorable residences; but in giving a preference to either, in this and all other complaints in which a residence in these places is useful, the practitioner must always keep in view the characteristic peculiarities of these climates formerly pointed out. There are cases of this disease in which the climate of the West Indies, as already remarked, would prove more effectual than any European climate; those, namely, of an indolent character with little disposition to febrile excitement.

Dyspepsia.—Different forms of dyspepsia, hypochondriasis, and other nervous affections, intimately connected with a disordered state of the digestive organs, all of which are aggravated by a cold and humid atmosphere, are much mitigated by a winter's residence in the south of Europe, if aided by proper regimen. Attention to the diet is particularly necessary in changing from a cold to a warm climate, and in no class of cases is this more requisite than in those of which we are now treating.

The dyspeptic invalid from the north will require to be still more on his guard in the south of Europe than in his own country, particularly as regards the use of stimulants; but in nervous and hypochondriacal cases the state of the mind must always be taken into consideration in our selection of a climate and residence for the invalid. Unless we can produce an impression on the mind as well as the body, we shall make little progress in the cure of these affections. A change from one place to another will, generally speaking, be better than a long residence at any one; as much of the benefit obtained in such cases arises from a constant succession of new and agreeable impressions made upon the mind. A judicious and timely change of climate, combined with a considerable extent of tra-

velling through a country and scenery which excite a lively interest, produces the best effects on the health of persons whose minds have been overstrained and exhausted by long continued application to the same subjects, or whose general health has been destroyed by chronic dyspepsia, and the abuse of medicines to which it too generally leads.

A single season properly spent in the south, more especially in Italy, is often productive of the most salutary effects in restoring the energy both of the mind and body; and if due attention is paid to regimen, especially as regards diet, the benefit derived will be both greater and more permanent than can be obtained, perhaps, from any other mode of treatment.

The morbid states of the mucous membranes generally are greatly benefited by a mild climate. We have already remarked its beneficial effects in the diseased conditions of the bronchial membrane, and that of the stomach, in dyspeptic affections. In similar states of the intestinal membrane, accompanied with chronic diarrhœa, a mild climate will contribute powerfully to restore the parts to a healthy state. Dysmenorrhœa, which is frequently dependent on irritation of the mucous membrane of the uterus, is often quite removed, and the healthy state of the whole uterine functions restored.

Irritable cutaneous diseases are also much alleviated by a residence in a warm climate.

It would be impossible, without extending this article to an undue length, to particularise all the disordered conditions of the system in which the change to a mild climate proves useful; but we must not omit to notice several distinct periods of life at which the beneficial effects of such a measure have appeared to us most striking, when from any cause the health has become deranged. The first is during childhood. From what has been said, in the early part of this article, of the operation of a mild climate on the various functions, it will be easily understood how beneficially this influence must be exerted at this early period of life, in favoring the growth and development of the system; and accordingly we have had abundant opportunities of observing the excellent effects produced on the health of delicate children by a residence of one or two winters in Italy.

When the health of children is naturally delicate, or when it has been rendered so by some of the diseases of childhood, such as measles, hooping-cough, scarlet-fever, &c., no measure with which we are acquainted will prove so effectual in restoring the health as a change to a dry and warm climate.

Again, about the period of puberty, or a little before this time, a change to a southern climate for one or two winters is a measure which, if judiciously advised and carefully executed, will seldom fail to improve the health of delicate persons, and favor the full development of the system which takes place at this period of life; and when there exists a disposition to tubercular disease, it will tend materially to obviate it. We beg, however, to observe that we speak of the effects of climate in those cases, not so much as a single remedial measure, as a measure which, while it contributes powerfully of itself to improve the health, favors the operation of a proper regimen, and such other remedies as the circumstances of the particular case may require.

The third period of human life at which we have remarked the powerful influence of a mild climate in ameliorating the health, occurs at a more advanced age. The two first occur while the body is yet in progress to maturity, the third when it has passed the zenith of its power. In the first instance, a mild climate enables a delicate frame to attain more certainly its full maturity; in the latter it prevents it from sinking prematurely into decrepitude, and enables it to prolong its existence until the period marked for its natural decay.

From about the age of fifty to that of sixty, though not unfrequently at a much earlier period, either when the system is naturally weak, or the causes of disease have been powerfully applied, the impaired condition of health now alluded to usually supervenes. This state is marked rather by anomalous disorder of various functions, indicative of a premature decay of the powers of life, than by any formal disease acknowledged in our systems of nosology. The activity of the mind and the bodily vigor have sunk many degrees, without any evident cause, and the individual, both in appearance and feeling, seems rapidly lapsing into premature old age and its accompanying infirmities. This disordered state of the health has been termed the *Climacteric Disease;* but, as we have already remarked, it occasionally occurs long before the period of life at which this change of the constitution is stated to occur naturally.

The causes which lead to this condition of the health are various; as, for instance, an anxious and sedentary life, long continued and close mental application, or irregular and intemperate habits of living; and oftener still it is the consequence of the combined influence of several of these causes. From whatever cause it originates, a change for one or two years to a

milder climate will prove of the greatest benefit in restoring the invalid to his wonted health.

Before closing this brief survey of climate, and of the various diseases benefited by it, there remains one circumstance to be noticed, and it is one of some importance to the invalid: we allude to the proper period for his returning to this country from the milder regions where he has been sojourning. Invalids finding a very sensible improvement in the state of their health, are too apt to consider themselves well, and become impatient to return home on the least feeling of inconvenience from the heat of the spring. Influenced by this or other causes, they frequently err by leaving a southern climate too early. A relapse of the disease, for the cure or relief of which they were sent abroad, is not unfrequently the consequence; and thus it often happens that by a little impatience, or imprudence, and occasionally from ignorance of the consequences, the advantages obtained by passing a whole winter in a mild climate are speedily destroyed. It should be the care of the medical adviser to warn his patient, before he leaves his own country, of the risk he runs by returning home too early. If his winter residence has been Italy, the invalid should avoid recrossing the Alps till the summer is fairly established in Switzerland. He may commence his journey northwards from his winter quarters in May, but should linger in the north of Italy, or among the Italian lakes, till he finds the heat inconvenient. This will seldom happen before the first or second week of June; and whatever may be his feelings in Italy, the period we have just mentioned will be sufficiently early to arrive in Switzerland. Independently of the risk of exposure to cold while crossing the Alps, which may, indeed, be avoided by proper clothing and arranging the day's journey so as to complete it before sun-set, the invalid will find a remarkable difference between the atmosphere of Switzerland and that of Italy. He will be particularly sensible of the keenness of the evenings and nights in Switzerland. Indeed, the scenery of these two countries does not differ more remarkably to the eye than does their climate to the feelings.

When the winter has been passed in Madeira or any of the other Atlantic islands, and more particularly the West Indies, the invalid should be still more careful not to leave his quarters too early in the season. By a little care to avoid exposure to the sun, he may escape injury from the heat; but it will be difficult for him to guard against the pernicious effects of our cold

north-east wind as he enters the channel, or arrives on our shores.

A delicate invalid who has passed the winter in any southern climate, should endeavor to arrange his journey or voyage so as not to reach England before the middle or rather the end of June; and his warm clothing, which he may have laid aside, should be resumed the moment his feelings tell him that he is entering a colder and more variable climate.

It is of the greatest consequence to invalids to maintain an active state of the circulation in the surface and extremities, which cannot be done in this country without the assistance of warm clothing. The increased circulation in the extreme vessels is one of the effects of a warm climate, from which the invalid derives the greatest advantage; and it should be his especial care to preserve it while in progress to and after his arrival in a colder, as to the steady maintenance of this for a considerable length of time he must mainly look for the preservation of his new stock of health.

In leaving his own country, therefore, in the early autumn, on his way to a warm climate, and in returning home in the succeeding spring, he should avoid exposure to great vicissitudes of temperature, and thus endeavor to secure the advantages, as it were, of several successive summers.

Art. IV. — Pathological Anatomy.

This branch of Medical Science, which is at present so earnestly pursued by European physicians, has not, as yet, gained footing, as a distinct department of instruction, in the Medical Schools of this country, nor participated so largely as it deserves to do in the professional exercises of individual gentlemen. It is now, however, gaining on the attention of American physicians, especially among those of Massachusetts, where its culture is facilitated by a favorable state of public sentiment, in regard to post-mortem examinations. That it may be pursued with gratification and success, nothing is more needful than a judicious text-book, containing not only the doctrines and precepts of the science, but pictorial illustrations of the results of their application by skilful and learned professors.

We know of no work which will furnish this desideratum, so well as that which is in the course of publication by Dr Carswell of the London University, a prospectus of which has been transmitted to us by a respected medical friend, and which we deem of sufficient interest to our readers to publish entire.

'*Elements of Pathological Anatomy*, illustrated by a series of Colored Representations of the Elementary forms of Disease. By Robert Carswell, M. D.; Professor of Pathological Anatomy in the University of London, &c, &c.

'There are few medical men acquainted with the present state of Pathological Anatomy, who are not fully aware of the advantages that would result from a work containing a succinct but comprehensive and philosophical view of all the important facts with which this branch of medicine has been enriched by the labors of pathologists of this and other countries.

'Many valuable works on Pathological Anatomy have indeed been published, but it does not appear that any of them is of such a character as to accomplish the important object referred to. In some of the best works on this subject, we find that either the results of the author's own observations constitute the principal objects of interest, or that particular diseases or departments of Pathological Anatomy are investigated to the almost complete exclusion of others; while in some of the more comprehensive, facts are unprofitably accumulated, or presented under such an unphilosophical form, that the Pathological Student is deprived of the advantages which he would otherwise derive from the perusal of them. Others, again, with more or fewer of these defects, are so expensive as to be rendered inaccessible to a large portion of the profession.

'It will not, it is hoped, be imagined that the above remarks are intended to imply that the works which have appeared on Pathological Anatomy are so defective as to be of no value in a practical or scientific point of view. On the contrary, they deserve to be considered as holding a high rank in both of these respects; as constituting one of the chief sources whence our knowledge of diseases has been derived, extended, and purified; and as having contributed, more than any other means, to create the necessity of such a work as that which is now contemplated.

'The chief objects to be held in view in an elementary work on Pathological Anatomy appear to be: — 1st, a clear and concise exposition of the principles on which, as a branch of

natural science, this department of medicine is founded: — 2d, the arrangement of the various subjects in such an order as will enable the student to comprehend, recollect, and recognise the essential and differential characters of each: — 3d, the investigation of these subjects in order to ascertain the origin and determine the seat and nature of diseases; — and, lastly, the application of the knowledge thus acquired to the detection, removal, and prevention of diseases.

'As an indispensable means of accomplishing these desirable objects, it is proposed to publish a Series of Colored Representations of the Diseases capable of such a mode of illustration. The Plan which will be followed differs from any hitherto adopted. Instead of arranging the representations of diseases according to the anatomical disposition of organs, and, consequently, bringing at once before the student a great number of *dissimilar* diseases, or of arranging them according to the tissues in which they occur, — a method equally defective in the same point of view, — the author proposes to adopt a purely *Pathological Arrangement*, making Diseases themselves the basis of his classification.

'In accordance with this Plan, each diseased state or product will, in the first place, be represented under that form which may be considered as constituting its *type*, or most perfect state, that is, that peculiar assemblage of characters under which it most generally presents itself, and by means of which it is distinguished from other diseased states; and, in the second place, as it appears in the different tissues, systems, and organs of the body. The *essential characters* of the disease, its various *modifications* and *varieties*, will be thus successively depicted, before passing to *another* and a *different* disease.

'Such a method of treating the subject is strictly *elementary*, and absolutely necessary to the proper understanding of organic diseases, as all representations of these diseases *en masse* and *in situ* are of little value without a previous knowledge of their *primary* forms.

'The author is fully aware of the difficulties attending the execution of the Work he has undertaken; but he is willing to believe that the exclusive and unremitting devotion of his time to the investigation of his subject for a period of twelve years, and under the most favorable circumstances, will enable him to accomplish it with some credit to himself and advantage to the profession. He can at least say that he is actuated by a sincere love for the subject of his labors and an ardent zeal for its advancement.

'The colored representations of diseases will be selected from a collection of nearly two thousand delineations made by the author from the actual subjects, and which represent the greater number of the more important diseases to which the human body is liable.

'It will be matter of much satisfaction to the author if the method of instruction which he purposes to adopt, shall be found to promote the object for which it is intended — that of communicating a more extensive and accurate knowledge of Pathological Anatomy, by means of which the Student may be prepared for becoming a useful contributor to the several departments of his profession; the Physician improve and increase his practical knowledge; and the Medical Philosopher become better acquainted with the laws of healthy and diseased organization.

'*Plan of the work and Conditions of publication.* 1. The publication of the Pictorial Illustrations will precede that of the Elements of Pathological Anatomy. This plan will not diminish the value of the Illustrations, as the different Parts will contain not only a detailed description of the diseases therein represented, but also a complete arrangement of organic diseases in general: they will thus constitute an entire work of themselves, and may serve as a guide to those who already possess works on Pathological Anatomy. 2. The Illustrations will be printed on superfine paper, in the royal quarto size, and published in Parts. 3. Each Part will consist of Four Plates, containing from Sixteen to Twenty Figures, drawn on stone, and colored by the first artists from the original drawings of the author; the Price of each Part to be Twelve Shillings. 4. It is expected that the number of parts will not exceed Twelve: the First will shortly appear, and will be followed by a Part every two months until the whole is completed.'

We are authorized to say, from a medical gentleman who has inspected Dr Carswell's preparations and drawings, and who has enjoyed and improved extraordinary opportunities for comparing them with other works of the kind, that the former are uncommonly perfect and valuable, and the latter remarkably faithful and instructive. From all we can learn we should think the work altogether preferable to anything of the sort extant, while the price will be very low.

If we could presume that what we have said, would contribute, in any degree, to awaken a zeal in the study of pathological anatomy here, we should be unwilling to leave the subject

without a salvo in favor of the appreciable and practical, nor without adding the hope that it will never become among us the engrossing passion which it appears to be with some distinguished foreign physicians. Every age has had its scientific extravagancies, and in no department of study, have they been more remarkable or absurd than in medicine, and we cannot but reckon the minutiæ of the *numerical pathologists*, together with the nice distinctions taken by *stethoscopists*, among the intellectual excesses of the times.

The learned Andral and his disciples, engaged in counting the cryptæ on an inch of mucus membrane, or measuring by lines, the stripes of this texture which they can tear up with the forceps, seem to us to be perverting observation, and wasting time, industry and talents, which, if employed under the guidance of more enlarged and truly philosophical principles of study, would afford large contributions to the cause of science and humanity.

We therefore consider the sober, sensible and practical Matthew Baillie a better model in such pursuits than the most distinguished masters of the science of the present day, and it would be to us an additional recommendation of Dr Carswell's book, if we could know that he had studied after his deceased countryman rather than the more attractive examples presented in his continental cotemporaries. E.

Art. V. — Dunglison's Medical Dictionary.

It argues no small progress in medical science in this country, even that the means were at hand for the compilation of so complete a professional Lexicon as this; for the author must have resorted to many sources of information which are only to be found where students have gone a little beyond what is merely necessary and indispensable, and are indulging in the refinements and luxuries of their pursuit.

Dr Dunglison is already known to the public as an author — probably we should say *favorably* known, if we had been ourselves so favorably known to the publishers of his Physiology as to have enjoyed an opportunity of examining it — and is doing much for his own celebrity, by his literary labors, while he is bringing into notice, in a most unexceptionable manner, the med-

ical school with which he is connected, and which has hitherto been far less conspicuous than comported with its name and advantages.

So far as we have been able to examine the Dictionary, it is exceedingly thorough and correct, not only in matters purely medical, but in whatever can fairly be arranged in the various branches of science, collateral or contributary to Medicine and Surgery.

The labor of the author must have been great, and we hope he will find a corresponding reward. If fame be his object, we commend him to the honor of being our medical Webster; while we cannot but believe, that he will find, following in the train of honor, the bearer of some more substantial remuneration for his patience and toil.

The publisher deserves credit, for the execution of the work, especially, considering that it was done under the disadvantage of being so distant from the author; excepting, in regard to the quality of the paper, which is not firm enough for a book presumed to be handled so much as a dictionary. E.

Art. VI. — Boston Society for Medical Improvement.

Regular Meeting, March 25th — Dr McKean in the chair.

Dr W. related a case to show the quantities of medicine that may be borne. He was called the day before yesterday to a child that had had cough for three weeks — lungs seemed much congested — sleepy; pulse 160 — had taken the evening previous, four teaspoons full of wine of antimony, which vomited it but once and lightly. A blister was applied to chest, 8 grs. of calomel and 15 of epec. were given without producing vomiting or dejection. Yesterday morning 10 grs. of Ipec. with four of antimony were given in divided doses, and produced one dejection, but no emesis. Two leeches were applied to temple last evening — symptoms of congestion of the brain, however, not being imminent — to-day is doing well.

[The affection of the brain probably indicates the true explanation of the remarkable insusceptibility to medicinal agents.]

Dr W. related a case of introsusception of the small intestines, in which the operation of gastrotomy was performed. The subject was a child six months old — had had diarrhœa

for a day or two. On Thursday the 21st inst. there came on vomiting with bloody dejections, and at 9 P. M. when Dr W. saw it, the vomiting was present — not greatly distressed. Took calomel and dovers powder, and was to have castor oil in the morning — after this time had very little vomiting, and first part of night was passed comfortably — was visited again between 12 and 3 o'clock when it had passed three mucus and bloody dejections, had vomited several times, and was greatly distressed. Castor oil was given at intervals, and before 8 o'clock on Friday morning it had taken six teaspoons full, without producing any discharge from bowels — occasionally vomited; but medicine seemed to be retained. The oil was continued through the forenoon, with occasional enemata. At 2 P. M., bloody discharge; but nothing more. A tumor is now felt distinctly in abdomen near left hypochondrium, two or three inches long, and about the size of the thumb. Leeches were applied to abdomen, and a warm bath — patient continued much distressed, and gradually sinking. On Sunday morning was getting worse, and certainly would die unless relieved. Dr Warren saw the child and an operation was decided on, and performed at 12 o'clock. An incision two or three inches in length was made in the left side into the cavity of the peritoneum; a portion of intestine was found in a state of introsusception, and the included portion was reduced — very little suffering attended the operation, but patient was once rather faint. After the operation, seemed for a time to rally, judging from pulse and skin; but continued to vomit, and died in the following night. On examination there was found to have been great disease of that portion of intestine which had been invaginated, and considerable peritonitis with effusion. Dr W. would advise the operation again in a similar case; but it should be done earlier. The diagnosis is easy — this is the third case which has fallen under his care, in all of which there had been diarrhœa at first, then a few bloody dejections, vomiting, and afterwards a complete obstruction of the passage of fœces. Almost always the tumor formed by the introsusception might be discerned.

Another gentleman remarked, that in a similar case, related by him at the last meeting of the society, the dejections were watery, and colored with a very florid arterial blood; and Dr W. observed that the blood, in his case, was rather florid.

Dr S. was called in consultation last week on an obstetric case — woman had been in labor 24 hours — pains nearly

ceased — pulse frequent, low — progress of head arrested by a stricture or bridle in the lower and back part of vagina, supposed to be a cicatrix left by sloughing of vagina, in last labour from use of instruments. An attempt was made to draw down the head, but without success — head was then laid open, and the bones removed — an hour was spent in removing the child after the head had been broken up — the patient sunk and died.

Dr W. reported a difficult obstetric case. Was called a week ago last Thursday to a woman 26 years of age, in labor with first child — 9 P. M. pains had been for 24 hours — os-uteri thin — some show — liquor amnii discharged night previous — pelvis small — bones of head firm — thought it would linger, and left her — called next morning at 4 o'clock, pains severe, very frequent — head did not advance — remained in attendance till 10 A. M. then gave 3 grs. of opium, which produced quiet sleep. At 5 or 6 P. M. pains returned, more regular and at longer intervals — at 11 P. M. os-uteri thin, size of a dollar — pains continued very severe till Saturday — at 6 A. M. on that day head somewhat advanced — retention of urine; removed by catheter — at 10 pains slackened — head large, and somewhat advanced — discharge of meconium — pains have been severe up to this time since 6 A. M., when ʒj of ergot was given in divided doses — at 1 P. M. head within an inch of os externum — tumour above pubes — no urine since morning — catheter — ergot given again — head did not advance — pains severe — delirium — unsuccessful attempt to apply forceps — vomiting — restlessness — vertigo. The child's head was opened with a penknife, and brain removed with a common spoon, and the woman was delivered quarter before 3 o'clock — was much exhausted — at 9 P. M. awoke from a sleep with a degree of composure which appeared alarming — pulse very feeble — wine and opium which had been given after delivery, were repeated — passed urine half an hour after child was born. The following Monday and Tuesday had stillicidium urinæ; since then has done well.

Dr W. thinks that ergot has a tendency to prostrate the powers of the system; and relates the case of a woman who had gone 10 months in pregnancy — had a fall at 9th month, and never felt child move afterwards — liquor amnii came away early and was fœtid — pains deficient — head near os externum — had been in labor 36 to 48 hours — pulse well, and no bad symptom. Ergot was administered, when in the course

of half an hour she began to fail, and in an hour and a half was in a dangerous state — head was opened and child removed, which was found to be quite putrid — the woman never rallied from the effects of the ergot, but sunk into a state similar to that described as 'putrid typhus fever,' and in two or three days, died.

Dr P. has had a case lately, in which there was a slight paralysis of the right arm and head, for a few days after using the ergot.

Dr M. gave an account of the effects of the Cashew *(Anacardium Occidentale,)* nut. Ten days ago several young men had roasted and eaten some of them — they all suffered more or less, from a severe eruption on face and hands — one of them who had eaten 12, had an attack of erysipelas of the face, also an itching and burning about the scrotum — fever — tongue loaded — had an emetic, which operated freely — next day scrotum and penis enormously swollen, with great heat and itching — eruption extended to chest — next day eyes were closed by the swelling of the face — eruption extended to hands. Now looks as if he had had scarlatina — some swelling, with scurf on face — still weak, and will keep his bed 5 or 6 days yet.

Dr S. has experienced the effects of this nut — applied a very little of the oil to a wart, and in a few days his face began to itch and swell, and was soon affected with erysipelas — vesicated — eyes closed, lasted for a week, subsiding as erysipelas does — the wart, however, was effectually destroyed.

Dr R. remarked on the free use made of it by the negroes in the West Indies, both internally and externally.

A paper was read on the 'yellow fever of this country;' — after which the society adjourned.

Regular Meeting, April 8th— Dr Channing in the chair.

Dr J. exhibited a trachea taken from a subject 84 years old, where all the rings were perfectly ossified.

Dr C. T. J. showed a pair of improved Polypus Forceps.

Dr S. related a fatal case of hernia. A laboring woman was seized with violent pain at umbilicus, while washing — vomiting and obstruction of bowels followed. On examination after death, a small portion of the small intestine was found to have passed down through the abdominal ring, and was strongly girt, the whole caliber being included — the intestine was gangrenous and completely disorganized — on attempting to raise it, it broke off, when the upper portion was found very

much distended with fœces, whilst that below the strangulation was quite empty — the stricture was very narrow — the sac had begun to slough.

Some remarks were made on the diseases of the season; and the society adjourned.

April 22 — Dr McKean in the chair.

Dr W. related a case of mumps, occurring in a gentleman of plethoric habit. The Dr found him with swelling of face, swelling and some pain in left testicle, headache, and pulse little accelerated. Next morning reported intense headache through night — no sleep — pain in limbs and back — skin hot — pulse quick and hard — was bled to ʒ xxx with temporary relief, and had an emetico-cathartic — in the evening pain as bad as ever — was bled to syncope, and again with temporary relief — in an hour or two the pain returned — 20 leeches were applied to head, and blister to back of neck — next morning comfortable, in evening leeched again with relief — colchicum was afterwards given, the bowels were affected and headache subsided — continued well for six hours — then came on, in the evening, swelling of shoulders and arms, with exquisite tenderness to touch — warm fomentations were applied, and the next day he was quite relieved. In a few days there came on pain in left hypochondrium, with affection of testicle — by leeches, fomentations and opium, the pain subsided — now convalescing — occasional headache with slight affection of the joints now and then.

Dr C. spoke of a case of mumps which had occurred to him a year and a half ago, with metastacis to testicles, and much constitutional trouble.

Dr G. mentioned a case in which there was transfer of inflammation to the uterus — fatal in four days.

Dr W. related a case of pericarditis — a man past the middle of life entered the hospital, having been 4 or 5 days sick, — history not known — half comatose state, and could not answer — one arm half palsied — some convulsions of arm and leg of opposite side — respiration quick and laborious, carried on by middle ribs — shoulders not raised — pulse 120, strong and hard — pupils not dilated — abdomen tender on firm pressure — impulse of heart strong — very little sound of respiration over lower part of either side — cupped with some relief — next morning was cupped and sinipisms were applied to the feet — in evening pulse active, and he was bled without

relief — died in the course of the night, 36 hours after admission to the hospital.

On dissection, very little disease was found in head — some serous effusion — blood vessels perhaps rather full — stomach and bowels well except some inflammation of glands — lungs healthy — heart three times its usual size — left side greatly enlarged and thickened — right side natural — mitral valves, thickened, and partially adhering to sides of the organ — aortal valves in a state of acute inflammation, having affused on their surface a thin layer of recent soft lymph, and one of them being very much softened — aorta measured 5 inches at its origin when laid open; its external coat was inflamed — pericardium in a state of severe, acute inflammation — its surface red, thickened, and covered with a thick layer of recent very soft lymph — the cavity contained about half pint of orange colored serum. Disease of heart had not been suspected.

Dr G. was called to a woman apparently laboring under acute pleurisy — taken in night with severe pain in side — cough — breathing hard — hot and dry skin. Was bled to syncope, blistered, vomited without relief — next morning found that she had a broken rib.

Dr S. mentioned a case of delirium tremens, in which the patient jumped from a three story window, and then walked about till he tired himself out — recovery from the attack was rapid.

No written communication was offered, and the society adjourned.

Art. VII. — Cholera in Havana.

[The following sketch of the circumstances attending the first appearance of Cholera in the West Indies, was kindly furnished at our request, by a gentleman now prosecuting his medical studies in this city; but who was residing at Havana during most of the time while the epidemic was there.]

Havana is a walled city and is situated on a harbor of the same name, with the sea in full view within a short distance upon the north. The exact population of the city and its suburbs is not known, but is differently estimated from 100,000 to 140,000 souls, the mean of which, 120,000, is undoubtedly

not far from the truth. It is thought that the number of inhabitants in the city is about equal to that in the suburbs, and that blacks and whites constitute an equal proportion. The city within the walls is regularly laid out in squares, the streets intersecting each other at right angles. The streets are narrow and filthy. The rain water and waste water from houses, run on the surface, in the middle of the streets, which consequently are always more or less wet. Most of the streets in the suburbs are also narrow, unpaved and exceedingly filthy from the accumulation of waste water, together with animal and vegetable substances undergoing decomposition. Many of the streets are impassable with carriages, the wheels going into the filth and mud from one to two feet. The bank of the ditch which surrounds the city, immediately out side of the wall, is strewed with all manner of nuisances, such as putrid carcasses of fowls and animals, excrements of bipeds and quadrupeds, and decomposing fruits and vegetables. The houses in the suburbs are principally one story high, and have large unglazed windows towards the street.

The climate is delightful in every respect; the mercury, by Fahrenheit's thermometer, ranges, while the sun is above the horizon, from 78° to 85°, and while it is below the horizon, from 70° to 77°. The mercury seldom rises above 90°, and as seldom falls below 65°. The writer of this was credibly informed, by a very intelligent valetudinarian, who has resided there some years for the benefit of his health, that the mercury was never known to fall below 58° above zero. The same degree of heat, as indicated by the thermometer, is much less oppressive in Havana than in the United States, in consequence of the refreshing breezes, which almost always prevail in the former place. The perpendicular rise and fall of the tide is from eighteen inches to two feet, consequently, comparatively speaking, there are no flats from the surface of which, mephitic vapors can escape.

The native inhabitants are very temperate in their habits, as it respects the use of stimulants; their drink consisting, principally, of orangeade, lemonade, and coffee.

Notwithstanding the salubrity of the climate, the temperance of the inhabitants, and other circumstances favorable to health, except the narrowness and filth of the streets, Cholera prevailed, as a malignant epidemic, from the last of February to the middle of April, at which time, however, it had not entirely disappeared, as ten or fifteen fatal cases were occurring daily.

A physician, who was in respectable practice, remarked, that, for several months before the cholera made its appearance, affections of the mucous membrane were uncommonly numerous, especially diarrhœa, coughs, and catarrh. From the middle of February to the middle of March, almost every person complained of having a severe attack of catarrh; for which no obvious reason could be assigned. On the 23d of February, the first case of cholera, that is known to have occurred in Havana, was found at the Punta, (point) which is at the north part of the city, outside of the walls, within one hundred yards of the sea. The subject was a white man, whose habits, being intemperate, were an exception to the general character of the Spaniards. The case terminated fatally, in a few hours after attack. Soldiers were stationed about the house, in which this case occurred, to prevent any person approaching it and contracting the disease. Although a sanitory cordon was thus established, still the disease appeared in different parts of the city and suburbs.

The writer was not informed of the occurrence of any case after the first, until the 27th, when several cases occurred and terminated fatally. After this, the number of fatal cases increased gradually until the tenth of March, on which day there were 221 burials, of whom 46 were whites, in the three principal cemeteries. Besides these three cemeteries, there were two or three smaller ones. After this time, the disease still continued to increase in malignancy and in number of attacks. On the 22d, the number of burials, in the three cemeteries just referred to, was 555, of whom, 153 were whites. It was judged by physicians, and other persons who had intercourse at the Governor's House, that, on the 22d instant, there were no less than 650 or 700 deaths. At this time, the epidemic had attained its maximum of severity, as indicated by the number of daily fatal cases. After the first of April, the number of daily burials began to diminish, and continued to do so until the middle of April, when there were 10 or 15 only per day.

The writer would not pretend to form any idea of theproportion of patients that recovered, from among all those that were attacked by the disease; but some did recover, as several convalescent cases came under his observation,—one of which, when first seen by him, was in a collapse state. He is not aware that any cases were reported, except those that proved fatal. Patients that recovered, passed rapidly through the convalescent stage, and without any typhoid symptoms.

In order to remove all doubt of the identity of the epidemic,

now in contemplation, with that which prevailed last summer and autumn, in the principal cities of the United States, the writer will enumerate the symptoms of those cases which came under his observation. The first departure from health was evinced by a looseness of the bowels; at least, the diarrhœa was found to have been a precursor of the incipient malignant disease, in every case seen by the writer, where the previous state of the bowels could be ascertained. The diarrhœa having continued from two to six or eight hours, retching and vomiting ensued. The alvine evacuations were thin and watery, having in suspension white flocculi, and presenting the appearance of gruel or rice water. The most universal symptoms were, entire absence of bile in the stools, coldness of the whole surface of the body, and the soaked, parboiled, and corrugated appearance of the integuments on the hands and feet; also, blueness of extremities and asphyxia. The eyes were retracted in their orbits and surrounded by a blue areola; nose presented a pinched appearance; tongue and breath, cold; voice guttural; great distress in the epigastric region; extreme and insatiable thirst; suppression of urine; violent and successive spasmodic contraction of muscles of the extremities and of the abdomen; rapid emaciation. The disease, in the majority of cases, proved fatal in from eight to twenty four hours, from commencement of diarrhœa. The patients retained, to the last, the unimpaired use of their intellectual faculties, and would answer, readily and pleasantly, any questions that were put to them.

The writer is unable to say what traces of the disease remained, after death, in the interior of the body, as he is not aware that any post-mortem examination was made. After the disease had prevailed several days, and many persons had died, a physician remarked that no bodies had, at that time, been examined, but it was then in contemplation to memorialize the governor for permission to perform a post-mortem. The same physician remarked, also, that he had been named as a suitable person for making the examination. At other times, as well as during the prevalence of the epidemic, permission must be obtained of the governor before any dead body can be opened.

Treatment. The treatment of the disease in Havana, was the same as it has been in most other places where it has prevailed, therefore it would be superfluous to go into details upon this point. They, however, adopted a new method of applying to the surface moist heat, which is worth relating. An open vessel containing a quart of unslaked lime upon which had been recently

poured the same quantity of water (hot if at hand, otherwise cold,) is put under the blankets, covering the patient. By this means may be obtained almost instantly a steam bath, the temperature of which may be of any required height. The advantages of this bath are the promptitude and facility of using it, both in private practice and in Hospitals, as well as its cheapness and high temperature, if such should be desired.

Origin of the disease. The epidemic could not be traced to any foreign source. The person first attacked by the disease had not been out of the city, as the writer was informed, nor had he intercourse with foreigners or with foreign vessels in port. As evidence of the absence of all good reason for supposing that the disease was introduced into Havana from abroad by contagion or any other way, it may not be improper to relate the rumors that were in circulation among the vulgar as to the alleged importation of it. Some said that the person first seized, took the disease from pine timber which was carried there from Mobile several weeks or months previous to his being attacked. Others said that a vessel had arrived on the western side of the island, which sailed from Africa with 1000 slaves on board, 500 of whom died on the passage, and the other 500 died soon after being put on shore. The last and most prevalent opinion however was, that the first cases were caused by innoculation of 'matter' taken from cholera patients and carried to Havana by a physician who visited this country last season during the prevalence of that disease in our Atlantic cities — all of which reports are idle tales, unworthy of the least credibility, and no credit was attached to them by physicians, or by the better informed portion of the citizens.

The epidemic, as it has already been remarked, commenced in the suburbs, and it was there that it caused the greatest destruction, and particularly in the southwestern part of the suburbs, where many entire families died of the disease. Although the population is about equal within and without the walls, still the number of deaths in the latter place far exceeded that in the former. Whether the greater fatality of the disease in this, than in any other part of Havana, is to be attributed to the uncleanliness of the streets, or to some other cause, is beyond our knowledge. There can be no doubt, however, that the filth, from which emanated an almost insufferable fœtor, was a powerful excitant of the disease, and that it coöperated with other causes to occasion the great number of cases in this particular section of the city. Soon after the irruption of the disease, the streets within the walls were made

comparatively clean, by setting to work in them an increased number of slaves, which circumstance admonishes us (bearing in mind the difference in ratio of deaths in the two localities) that in order to prevent the prevalence of the epidemic, we should place more confidence in measures for cleaning the city, than in quarantine regulations or sanatary cordons

Previous to and at the time the epidemic was at its height, large quantities of pitch were burnt in different parts of the city, and cannons were discharged from the fortresses, with the view of arresting the prevalence of the disease; but without any obvious good effect. It has been thought by some that the use of tobacco might be a preventive of the disorder; if it had been, the cholera could never have prevailed but to a limited extent in Havana, as almost every male and some females use this article by either smoking or chewing. In regard to the use of tobacco, the writer also noticed that it did not have that effect on the teeth which most persons think it has; that of preserving them from decay. Nothing was more common than to see young persons as well as old, who had lost their front teeth, or had nothing but black stubs remaining. Perhaps it may be said that this premature decay or loss of the teeth, may be owing to the excessive use of mercury; if so, the writer is in an error, as he was informed that strong prejudices existed against this medicine, and when it was used, which was seldom, it was given in the name of antimonial powder.

Class of persons attacked. By referring to the number of burials on the 10th and 22d of March, a list of which was obtained from an official source, it will be seen that on the former date, twenty per centum of all the bodies buried were whites, and that on the latter date twentyseven per centum were whites. From this it appears that about three of every four that died were blacks. Persons attacked, when there had been no obvious exciting cause, were more frequently of infirm health than otherwise, so far as the writer's observation extended. This remark is intended to include all persons, whose general health was in a poor state — which state might be the effect of a chronic disease, imprudent habits, or any other cause. In illustration of this remark may be named the following cases. Mr A——, who was a person of the most correct habits in point of diet, regimen, and every other respect, died twelve hours after being seized, and there was no exciting cause. He had the diarrhœa two or three hours before the severer symptoms were developed. But he was far from being a man in

good health. He was subject to frequent attacks of 'sick head-ache,' which compelled him to keep his room and generally the recumbent posture, six or twelve hours each time. The sick head-ache recurred every week or ten days, and sometimes twice a week. Mr B— died six hours after attack. In his case there was no exciting cause known to have existed nor did he indulge in excessive use of spirituous liquors. But he was not in firm health, although he appeared so, and attended to his business, up to the evening preceding his death. He was under the influence of mercury for a disease for which this medicine is considered a specific. This case is the more interesting, as it tends so far as it goes, to overthrow the opinion that a cholera patient, if in a state of salivation, is consequently safe. This opinion is current, at least among men not medical, for Mr B. himself remarked to the writer, two days before he died, that his friends might be alarmed, still he had no reason to be apprehensive of his own safety, for he was under the influence of mercury.

At the time the irruption of the epidemic occurred, and during its prevalence, there were a great many vessels in the port of Havana, of course there must have been many seamen whose habits had predisposed them to an attack of the disease. But very few of that class of people, however, became its victims, and what is still more remarkable, that of more than fifty American town-women, not one is known to have died.

The epidemic appeared in the country towns soon after its irruption in the city, and proved very destructive to the negroes. On some plantations, a third or half, and it was said in a few instances, all the slaves died.

The information contained in this communication was obtained by observation, from physicians, and from gentlemen who had intercourse with the civil officers.

Art. VIII. — Influenza.

[We republish the following abridgement of Dr Brown's excellent paper on Influenza, in the Cyclopædia of Practical Medicine, not only for its intrinsic value as a monagroph; but also for the interesting views it presents of the analogy between the natural history of this epidemic and Cholera. If the lat-

ter is destined to become, like the former, a recurring epidemic, we may indulge the hope, that it will resemble it also in becoming less malignant under the influence of time, and such other unknown causes, as have rendered the recent visitations of Influenza so much more gentle and manageable than its first manifestations. E.]

The disease now commonly known by this name, first given to it by the Italians, was not particularly noticed by physicians before the sixteenth century. Since that period it has many times appeared in Europe, and in other quarters of the globe. Influenza seems to bear the same relation to ordinary catarrh that epidemic cholera bears to the common or sporadic cholera that occurs every year. Of all epidemic diseases it is the most universal; and the rapidity of its march, and extent of its range over land and sea, sometimes in both hemispheres and in different climates, in opposite seasons and in all varieties of weather, among people of all classes, naturally led to the supposition that some extraordinary *influence* could alone give rise to such a wide-spreading malady. The French call it *la grippe*, under which name Sauvages first described the epidemic catarrhal fever of the year 1743.

To collate the various accounts of any one visitation of this epidemic, such, for example, as that of 1775, or of 1782, or of 1803, in order to deduce some general principles respecting its mode of propagation, pathology, or treatment, would occupy a considerable treatise; it must, therefore, be an elaborate task to draw general conclusions from all the records we now possess, of this singular disease, and to condense them in a space suitable for a work like the present. Limited by this circumstance, we shall take a brief survey, first of the most remarkable dates of its appearance and progress in the last three centuries; secondly, its symptomatology; thirdly, its treatment; fourthly, facts and general inferences relative to the causes of it, such as phenomena of the weather and diseasss among brutes; fifthly, its contagious property; and, sixthly, its influence on other diseases, and connection with diarrhœa, dysentery, and cholera.

I. We find no medical description of the epidemic catarrh fever before the year 1510. "It was called *coccoluche*, because the sick wore a cap close over their heads." The symptoms of the disease, as it then occurred, nearly resembled those which it has assumed in later visitations, namely, severe pain over the eyes, sneezing, coryza, heaviness, difficulty

of breathing, hoarseness, loss of strength and appetite, fever and harassing cough. Schenk says that physicians then looked upon it as a new disease. Its course seems to have been in a northwesterly direction, from Malta to Sicily, Spain, Italy, Germany, France, and Britain; and Short says, that 'it attacked *at once*, and raged over all Europe, not missing a family, and scarce a person, and that none died except some children. In some it went off with a looseness; in others by sweating. *Bleeding and purging did hurt.*'

[To be continued.]

Sugar of lead and decoction of poppy heads in Cholera Morbus. M. Dupuytren, in a letter to Baron Rothschild, on the malignant cholera, says that in the treatment of common cholera morbus, he has never found anything more successful than sugar of lead, administered in a strong decoction of poppy heads. This opiate draught, he thinks more efficacious than any other preparation of the article. It should be sweetened and combined with mucilage of gum Arabic. The sugar of lead, which he calls *a sedative, par excellence, in inflammations accompanied with excessive secretions*, operates better in solution than in pills. He gives three, four, or five grains in each glass of the decoction, every hour, till the evacuations are diminished and the patient relieved. E.

Pus in the substance of the heart. M. Casimer Broussais presented to the Academy of Medicine, at one of its sitting, in 1832, a specimen of pathological anatomy, which has been but rarely met with. A young soldier had had confluent small pox, and died on the fifty-fifth day from the attack. Twenty-five days from the commencement of the disease, an abscess was discovered in the left elbow, containing pus, of a bad character. The face, arm, and hand, of the same side, lost their natural heat, and were enormously swollen. The man was exceedingly emaciated, kept his bed continually, lying, almost motionless, upon the right side, speaking only in a feeble and complaining voice, but without indicating any local pain; and exhibiting in his countenance the most extreme anxiety. A post-mortem examination showed the heart somewhat enlarged, the hypertrophy being confined to the left side. At the base of the left ventricle, behind the mitral valve, and in the substance of the fleshy tissue, was found an abscess as large as a hazel nut, containing a white, homogeneous pus. E.

COLLECTANEA.

New Proofs of the Veracity of Contagionists.

'A medical Journal, in giving in its last number an account of a Memoir by Drs Trompeo and Rolandis of Turin, on the cholera morbus of Paris, states, "that one of the most remarkable circumstances cited by the authors in favour of contagion is, that of a certain number of mattress-makers, who, having been occupied in carding the wool of beds previously used by cholera patients, were, almost all, attacked with the disease, — but (says the journalist), I do not know where those gentleman obtained their information, or whether it be true."

They obtained it from the mouth of the grand master of contagion, M. Pariset, who positively affirms that it occurred at the Salpétrière. As to this statement, we can assert that it is not true,—that, far from almost all the mattress-makers in question having been attacked, a very few of them had the disease ; and we do not see why they should have been more exempt from the epidemic influence than the other inhabitants of that vast establishment, who suffered greatly from cholera, not excepting the insane.

In a similar manner did Messrs. Pariset and Audouard assert, that the mattress-makers of Barcelona were almost all attacked with the yellow fever, as the consequence of their particular occupation, during the epidemic of 1821 in that city : but M. Chervin subsequently placed before the Academy of Medicine authentic declarations from the mattress-makers, proving that the statement of Messrs. Pariset and Audouard was utterly fabulous.

It is thus, nevertheless, that *Messieurs les Contagionistes* write the history of events, and enlighten governments which place confidence in them.

Why is it to be wondered at that our neighbours adopt the most rigorous and absurd measures against the pretended contagion of cholera, when we see certain paid agents of government become the apostles of that chimera, and, in their zeal for the cause which they defend, falsify the facts which pass before our eyes.'

'The two persons referred to in the foregoing extract, Drs Pariset and Audouard, have, from the nature of their employments, long proved the very great utility of quarantine regula-

tions to themselves. How truly was it said the last year by Magendie to Lord Auckland,—"If you wish, my Lord, to get rid of contagion, *pay no quarantine people.*" He told the same to the Prime Minister of France. What thousands of lives might have been saved had this advice been taken! In this country, the mischief arising from the fatuous decision, against evidence of the committee of imbeciles first consulted, might have been stayed: events would have reached the public eye in a purer shape, instead of being artfully dressed up by a *grand-maitre*, with his tried lieutenant and a troop of mercenaries. Communities, not being foully swindled out of their common sense, would have been able to appreciate, very soon, the difference between a cause and a mere coincidence; the gates of the splendid public hospitals, which are such an honor to the country, would not have been closed against the sick, who as we well know, have perished, in many instances, for want of due accommodation and attendance. We are well aware that the most consummate art has been practised by a knot of fattening contagionists, to propagate through every possible channel their doctrines from this to other countries. In our last number, we gave proofs that the medical men in the United States seemed to be judging for themselves, however, unbiassed by management practised here. But far otherwise it seems to be, we are sorry to say, with the people at large there; for it would appear that, with them, the falsehoods propagated by some of the *employés* in this country, as to cholera being transportable by such things as the sails and ropes of a ship, &c. &c. have gained credence, and, as may be seen in an extract of a letter from Watertown, given in the Paris Medical Gazette of the 9th inst., the sick are, consequently, treated like wild beasts — "*On traite une pauvre malade comme une béte farouche!!*" A dungeon and bread and water for the remainder of their lives would be but inadequate punishment for the mischief inflicted on society every where by persons who have, from interested motives, been active in propagating the most fiendish doctrines.' — *French Lancet.*

Hysteria.

Professor Chiappa states, that enemata of iced-water immediately dissipate the symptoms which characterise the hysteric paroxysm. — *Annali Universali.*

Nocturnal Emissions of Semen, and Leucorrhœa.

Professor Bang of Copenhagen, strongly recommends for the cure of this affection, the muriated tincture of iron. Dr Cless

states that he has employed the cubebs with advantage, for the relief of that discharge. He states also, that he cures almost all the cases of leucorrhœa that occur in his hospital at Stutgard with cubebs.

Self-Murder.

Pursuing my arrangement of the varieties of monomania, I now come to the opposite aberration of the natural feelings of mankind, namely, that which leads to self-murder, and in which every attachment to life is completely annihilated or overpowered.

The tendency to suicide, though forming a very characteristic monomania, and though existing also to a prominent degree, in many cases of confirmed madness, must not, however, be regarded exclusively in this manner. Under many circumstances this disposition should doubtless be regarded as the simple result of certain directions of the intelligence, in relation to prevalent institutions and customs. In ancient times, under the operation of pagan notions and peculiar civil circumstances, such as those of republican Rome, the frequent, the constant, commission of suicide was not the effect of monomania. At the present day, again, in many countries of inferior degrees of civilization, we find the practice prevalent, and we readily trace its cause to the influence of particular religious or social opinions. In India, the widow, in full possession of mental and organic health, ascends, of her own free will, the burning pile of her husband. In the same country there is a temple, that of the Idol Jughernaut, where, at the annual sacrifices, multitudes of devotees eagerly fling themselves under the ponderous wheels of the chariot of the idol, and expire in the most fearful tortures. Others, again, as eagerly seek self-destruction in the sacred waters of the Ganges. Now all this is not monomania. It depends on the operation of totally different causes.

It is, again, to be distinguished from the suicides which occur during violent excitements of unruly temper, a state more allied to mania. Neither is it true monomania when it occurs in persons previously mad, and in whom the operation of certain motives may occasionally be detected. I now turn to the true monomaniac. Sometimes we find him tormented by a predominant monopolizing conviction of the necessity forself-immolation, or urged to it by perpetual hallucinations, by the desire to escape the pursuit of hideous spectres or other imaginary objects, among which the *agents of the police* sometimes hold a foremost rank. Again, the aberration is often the effect of certain philosophical tendencies, themselves perhaps totally opposed to each other.

The *materialist*, when tormented by care or misery delusive or real, seeks in suicide a repose which his tenets persuade him to be eternal. The *spiritualist*, on the other hand, if his notions be not influenced and counterbalanced by the principles of Christianity, not unfrequently has recourse to suicide as the shortest route towards extreme and immortal felicity. The latter impulse, namely, that of exaggerated or perverted spirituality, is shown, by numerous facts and calculations, to act much more frequently than the former. Who has not heard of the strange societies in Germany—the land of spiritualism—*for the mutual encouragement to self-murder!* I had myself a young acquaintance, a youth of brilliant promise, surrounded by every circumstance conducive to happiness. In an evil hour Plato fell into his hands, it became his constant study and contemplation, until, at length, bewildered by the sublime conceptions of the author, every link that bound him to society was severed, and suicide was the sad result. Other species of monomania tend, by a natural transition to pass into this. That which has been called melancholy, for example, the '*spleen*' of the English, the '*ennui*' of the French, the '*tedium vitæ*' of the Romans, all these are of this description. Frequently the tendency seems connected with, or preceded by, functional or organic disease, independently of any moral reason. M. Esquirol describes a case of an individual who very suddenly, and without any assignable motive, fell into this state, at the same time complaining of uneasiness of the head and epigastric pain. At other times complaints and symptoms arise, nearly the same as in hypochondriasis, but with this grand distinction, that while in the latter the delusive diseases prompt the patient to additional fondness for life, in the aberration of which I now speak, it urges him vehemently towards self-destruction. He becomes indifferent to all the affections of life; he repudiates his social duties; deserts society for solitude; shunning the least exertion, every act, however trifling, the very writing of a letter, is avoided with apprehension. But what constitutes one of the special peculiarities of this state, is, that the individual thus affected, has a consciousness of his own condition. He wishes to exert himself, but finds every attempt unsuccessful; he feels and knows that he is different from other men, and he consequently sinks into the profoundest mental discouragement.

Sometimes the malady is but transitory; at other times permanent; occasionally intermittent; or it may alternate with mania, as in cases M. Esquirol has described.

While in a multitude of cases some apparent motive may be traced for this tendency, — in others, and in a far minor number, no known cause can be discovered. An unaccountable, but overruling disposition, urges to self-murder, as in others it does

to the commission of homicide. The tendency to this aberration may exist, too, in individuals in a perfect state of intellect. There are many men, perfectly rational, completely undisturbed by care or pain, who, singular to state, have been suddenly seized by a headlong, groundless, inclination to destroy themselves. There are hundreds who cannot approach the brink of a cliff, or ascend a lofty tower, without experiencing an almost invincible desire to precipitate themselves to the bottom, from which fate they only save themselves by an instantaneous effort to retire from the temptation. I know a gentleman who, while shaving himself one day alone, was three times so vehemently urged to plunge the razor into his throat, that he was at length compelled to throw the instrument from him in absolute horror and dismay. In rational men, however, these trying and dangerous moments are but of very short duration.

Another source of suicidal monomania, is the perversion of the natural instinct of imitation, to which I alluded in a previous lecture, a perversion which clothes suicide with an epidemic form, and constitutes one of the most extraordinary points in the history of humanity. Having on that occasion mentioned some singular examples of the occurrence in question, it becomes unnecessary to repeat them here.

The moral circumstances which predispose to suicide, or act as its occasional causes, form a subject of much interest for the consideration of the physician. I have here a work containing a vast body of facts and statistical calculations elucidating this point. The number of cases are so great, as to afford very satisfactory conclusions. They are collected by M. Falleraye and detailed in the records of the police of Paris for a period of several years. Of 6782 suicides, there were occasioned by

Disappointed love *	254
Jealousy	92
Humiliated self-love	53
Grief	120
Remorse for misdeeds	49
Blighted ambition	122
Reverse of fortune	322
Gambling	155
General bad conduct	1287
Domestic chagrin	728
Misery	905
Misanthropy	3

* Of these, 157 were females.

The causes in the remaining numbers were not ascertained.

Suicide, as might be expected, is more frequent in towns than in the country. In Prussia, Casper has computed, that while in the towns the proportion of suicide was 14 in 100,000, in the country it was but 4 to the same number.

Esquirol and many other authors, entertain no doubt that onanism, when carried to excess, leads to this aberration. The abuse of spirituous liquors is another. Certain physiological conditions, too, have a great influence upon it. Several females while pregnant, others at the recurrence of the menstrual period, can scarcely be kept from destroying themselves. Different *ages*, again, are differently visited. It might be supposed, that as old age increases, and as the charms and value of life diminished, there might be a greater tendency to abandon it by the commission of suicide. The contrary, however, is the fact. In a number of cases collected by Falleraye, the great majority were aged between 30 and 45 years. Before 20 and after 60 it is very rare. There are, I know, examples of suicide among children. There is one at 10, one or two at 13, and so on. There is also a case aged 87 ; and you are aware of the history of the veteran professor who killed himself at Montpellier. The *sexes* also differ in this respect. In France men commit suicide in the proportion of 3 to 1 female. In some countries, however, this is reversed. With respect to the civil state, it appears from Falleraye's calculations, that two of three are not married ; among the married, in 1695 cases, there were 960 men, and 735 women. *Hereditary disposition* is another unequivocal agent. In the *Annales des Sciences*, there is the account of the destruction by sucide of an entire family. Falleraye relates the cases of a father, son, and uncle, committing suicide nearly stimultaneously, while another member of the family, when viewing the bodies, could scarcely control his urgent desire to follow the example before him. The celebrated American physician, Dr Rush, cites the histories of two officers in the American army, both men of determined courage, of close personal resemblance, of cheerful disposition, the sons of a gentleman who died by his own hand. They had two sisters in a state of mental alienation, and the mother was also irrational. One of the brothers was sent to the National Congress at Philadelphia ; he proceeded in good spirits on his mission, and was absent but a few days, when he blew his brains out with a pistol. About the same time the other brother, without any obvious cause, put an end to his existence by cutting his throat.

Various other circumstances, such as season, temperature, popular religion, &c., also operate as influencing or counteracting causes. In Paris, according to Falleraye, the greatest number

of suicides occurred from April to August inclusive. Other researches, conducted by the Council of Health, lead to similar conclusions. Thus, between 1817 and 1826, of 3460 cases, three-fourths occurred in spring and summer. M. Esquirol has also come to the same conclusion, and calculations at Marseilles agree with the preceding indications. In the lunatic asylums, the number of attempts at suicide is always greatest in summer. On the whole, these facts are sufficient at any rate to destroy the poetical ideas which associated the suicidal tendency with gloomy and depressing weather. As for *different countries*, here also there are some facts presented which are worthy of record. In France, England, and Germany, suicide is frequent, while it is rare in Spain, Italy, and Prussia. By the latter group we perceive that similar results take place in opposite temperatures and climates. We must look for the cause then rather in the social habits and peculiar institutions of each nation. Take Italy for example. During the time of the republic, and under the dogmas of heathenism, suicide was of constant occurrence, was, in fact, a national characteristic, and ranked with the Roman virtues. In modern Italy, on the other hand, the occurrence is very rare, perhaps owing to the strong operation of a religion which, above all others, opposes itself to the commission of self-destruction.

Not the least singular feature in the history of suicide, is its occasional rapid increase in particular places. So extraordinarily prevalent at one time had suicide became at Berlin, that calculations were made to investigate its rate of progres in different periods. This computation was made by Dr Casper with the astonishing result, that while, during the seventeen years following 1758, there was but one suicide in 1800 deaths, in the twelve years following 1787, there was one in 900, in the twelve years from 1799, one in 600, after which the practice became for a period so singularly prevalent, that in Berlin alone, the deaths by self-murder were one per cent of the total mortality. —*Andral's Lectures on Insanity.*

Erysipelas of the Face and Head.

There was a case last week, gentlemen, of which I had not time to speak, but which was particularly interesting, as pointing out the great use of the application of the nitrate of silver in erysipelas. It was the case of a woman aged 54, who came in with erysipelas of the whole of the face. Her face was red and swollen, her eyes were closed, and her features all disfigured, and, of course, there was quickness of pulse, and the usual constitutional symptoms of a severe case of erysipelas.

Treatment.—Before I saw her, twenty leeches had been applied to the face, and cold water used; she had, likewise, taken five grains of hydrargyrum cum creta every six hours. I saw her on the next day, and the leeches appeared to have done her good, so much so, that I prescribed twenty more, and twenty more for the following day, provided they should be requisite. Her bowels not having been opened, I ordered her twelve grains of colomel, which were to be followed by half an ounce of castor oil, if necessary. I likewise directed that the nitrate of silver should be rubbed all around the head beyond the inflamed part (the inflammation not having spread higher up the forehead), and likewise around the neck, so as to prevent the inflammation from spreading all over the scalp, and down to the trunk. A black band was thus formed above and below the erysipelas, which checked the inflammation. But a slight portion just at one spot had not been completely touched by the nitrate of silver. There had been some grease upon the skin, or something intervening, so that, as it turned out afterwards, the caustic had not blackened one spot, although at the time of the application, it appeared as though every part had been touched with the remedy. Through this space the erysipelas spread a little, and therefore, it was necessary to make a second band still higher up, which checked the progress of the complaint, and we had no further extension of it, either upon the head or below it, and the woman ultimately did perfectly well. No further medicine was given. On the 17th of the month she was allowed strong beef-tea, with tapioca, and, on the 23d, house diet and porter were allowed her.

This was just such a case of erysipelas as I have seen, over and over again, terminate fatally. I always, myself, dread to attend a case of erysipelas of the head, so very frequently does it prove fatal, in spite of whatever measure one adopts. Very often it is necessary to use antiphlogistic measures vigorously, but often, also, these cannot be borne, and one cannot carry them further than local bleeding, by puncture or leeches, and very often one cannot venture to have recourse even to local bleeding. It may be necessary, from the beginning, to employ sulphate of quinine, and order good food, and, frequently, there is far less danger in ordering good diet, and tonics, in these cases, than in any other inflammation. Even when the inflammation of erysipelas is active, patients frequently require both support and tonics, in a way that they would not bear under any other description of inflammation. Still there are cases where you must treat the patient on a decided antiphlogistic plan.

But in spite of adopting measures suited to particular cases, I have continually myself lost patients in this disease, and I would rather at any time have not attended, than attended a case of

erysipelas, of the head. But since the practice of Mr Higginbotham has been adopted, the disease has appeared far more tractable than before. In the case, which I spoke of formerly, of the same disease, occurring in a patient in Jacob's ward, where the affection was very severe, it was entirely checked by the application of the nitrate of silver around the forehead, and likewise around the neck. It was necessary in that case, also, on account of a slight portion which was not touched, *perhaps a hair's breadth*, through which the inflammation crept (and which is a curious circumstance), to make a second band, and after that, the disease was arrested. A blister, I mentioned before, will frequently have the same effect, but it cannot be applied with the same certainty as the nitrate of silver. The latter is much more to be depended on. In every case of erysipelas I would strongly recommend the application of the nitrate of silver around the portion which is inflamed. In the case lying in Jacob's ward, the man is doing perfectly well. The erysipelas is entirely over, and I have no further fear respecting it. — *Elliotson's Lecture.*

Artificial Mode of Inducing Parturition.

In the annual statements just published by professor Ciniselli of Pavia, regarding the clinical events in the obsteric establishment of that university, there is a case of artificial delivery at the eighth month, successfully induced by the introduction of a sponge dilator into the mouth of the uterus. The sponge first employed was about an inch long, and the thickness of a quill. When its increase of size had dilated the orifice to a certain extent, another, a little larger, was substituted for the first, and with the same effect. In the course of forty-eight hours four sponges were employed, when the delivery was accomplished by the natural contractions of the uterus, and with safety to the mother and child.

External use of Croton oil in Laryngitis.

A mantua-maker, ætat, 30, had, during a month, suffered from cold and cough. For fifteen days the voice was completely extinct. The lungs examined by the stethoscope were, however, completely healthy ; the bronchi free from irritation ; the pulse natural. Every symptom, in short, depended on the larynx alone. On the day of her admission six drops of croton oil were rubbed on the neck, which quickly produced a crop of confluent pustules, and slight erysipelas of the left cheek also occurred. In twenty-

four hours the voice was reëstablished, and in two or three days she was perfectly well.

At No. 7 of the same ward, there is at present a female affected with bronchitis and chronic laryngitis. She was completely aphonic on admission. After a friction of four drops the voice returned, but as the eruption faded it again became weak ; another friction was sufficient, however, to a complete cure. —*Lancette Francaise.*

Ulcers of the Legs.

The following cases of ulcers of the leg, will serve to show the method of treatment most usually adopted in these affections by the surgeons of the London hospital.

Sir W. Blizard's patient. — The first case, selected from among Sir W. Blizard's patients, is that of a woman in Sophia's ward. The ulcer was situated on the fore part of the tibia; it had existed about four months, and was of the size of the palm of the hand : when admitted, it had a foul unhealthy appearance, the integuments surrounding the ulcer were of dark unhealthy character, the edges thick, and evincing a disposition to pass into the phagedenic character.

The patient was of a pale, sickly appearance, with a weak, languid pulse, and evident torpid state of system.

The treatment adopted was rest in the recumbent posture, confining the patient to her bed, and applying the *sour wash* (1 part vinegar to 2 parts water) to the ulcer, giving internally the *decoctum cinchonæ cum sodæ carbon. ter die. and* 3 *grains of blue pill at night.*

Under this plan of treatment the patient has left the hospital with the ulcer healed.

Mr Andrew's patient. — The case selected from among this gentleman's cases is that of a young woman in the same ward. This patient, some time previous to her admission, received, while in servitude, a blow on the tibia, which was followed by inflammation and ulceration of the integuments, leaving an ulcer about the middle of the leg, of about the size of a crown piece.

This case was dressed with the *unguentum zinci*, confining the patient to bed. The constitutional treatment consisted in giving the *Pil. aloes c. myrrha* and *Pil. ferri comp.* This patient eventually left the hospital cured, after being in the house about three months.

Mr Scott's patient. — The case selected from among this gentleman's patients is that of a man in Talbot's ward.

This patient was admitted with a large sloughy, unhealthy-looking ulcer on the lower part of the right leg. The integu-

ments surrounding the ulcer are of a dark unhealthy appearance; the granulations of a flabby character; the foot is edematous; the patient's looks shows a great want of power in the constitution; his habits were irregular previous to admission, being obliged to work hard for a scanty subsistence, and at times, when able, drinking a good deal. The treatment adopted in this case was as follows: — Confinement in bed, the foot elevated on the inclined plane, the *chloride of lime lotion* (℥ j to aquæ ℔ j) to the part, and the internal exhibition of the *carbonate of iron*, ℥ j *ter die*, with full diet, and a pint of porter.

Under this plan of treatment healthy granulations sprung up, and the cure was perfected by strapping the part with the *emplastrum plumbi* and rolling the leg. — *Lancet.*

Chronic Enlargement of the Testicle.

The subject of this affection was admitted into the hospital on the 22d of Nov. The patient, a man about 25 years of age, was apparently much out of health; was of a spare habit of body; he had a sallow complexion and unhealthy appearance. The right testicle was found to be enlarged to at least three times its natural size, and was so exceedingly firm that it might be said to be of scirrhous hardness. Every part of the body of the testicle was equally indurated, but at the upper part there was an elastic feel differing entirely from the principal bulk of the tumor, which evidently arose from the presence of a fluid. The spermatic chord was thickened; we could not discover any difference between the epididymis and the body of the testicle, notwithstanding considerable pains were taken in the examination, the whole being mingled together in the disease. The integuments were not inflamed, but the patient complained of a dragging pain in the loins, and considerable pain in the testicle; the pain was excessive on the slightest pressure being made on the part.

The disease commenced about seven months ago. The pain attending it was not severe until within about a month previous to his applying here, when he received a blow on the scrotum, from which time, he says, the pain has been considerable, and prevented him from following his business, that of a hawker. The patient says he has not had any venerial affection for the last two years, when he had gonorrhœa, the discharge ceased from taking improperly the balsam of copaiba, and he had a swelled testicle on the *left* side, but from which he soon recovered.

The treatment adopted in this case, was confining the patient

strictly to his bed, and applying a considerable number of leeches to the part; after the bleeding had ceased, spirit lotion to the part, purging the patient and keeping him on milk diet.

In the course of a few days the pain diminished materially, and we thought the testicle became softer. On the 29th, he was directed to discontinue the leeches and lotion, and rub in upon the testicle about a *scrup'e* of the *strong mercurial ointment* every night, and take five grains of blue pill at bed-time. He continued this plan for four or five days, without the mercury having any perceptible effect, and was directed to rub in the same quantity of mercurial ointment night and morning instead of only at night, and also to take two of the pills at night and one in the morning with *half a grain of opium at night.*

Dec. 10. He has continued taking the pills and rubbing the in the murcurial ointment: his mouth has become very much affected; the gums are excessively tender, and there is profuse salivary discharge. — The disease in the testicle has become materially mitigated; the testicle has become softer to the touch, and is likewise reduced in size — says the pain in the testicle has entirely left him. Was ordered to discontinue the mercury, and take occasionally an aperient.

17. The improvement which has taken place in this case is surprising; the diseased testicle is much diminished, and is soft to the touch; in different parts there is a preternatural hardness remaining, but the disease has rapidly given way from the time he became affected with the mercury. Was ordered, *extract. sarsæ.* 3 j *ter die*, with the view of improving his general health.

The tumor has gone on gradually decreasing, and his general health has materially improved. To continue the sarsaparilla.

Jan. 3. The patient has gone on gradually improving since our last report. The testicle has continued to decrease, and is now not very much larger than the apposition — his general health is much benefited, and he will soon leave the hospital.

Lancet.

Vital Dilatation of the Urethra.

Among the numerous examples of the *vital dilatation* annually detailed in these lectures, we shall at first mention the following, which is more curious, as it should be considered the originating point of the new method. About eighteen years since I was called to attend a very rich, nervous, prodigiously-susceptible man. He suffered much from dysuria. I advised the bougie. The proposal alone was sufficient to frighten him out of his wits.

Magnifying the pains and dangers of the bougie, he felt convinced that it must do him mischief, for if the urine already came only drop by drop in consequence of the disease, he thought it could not come at all when the passage should be blocked up with a solid body. Persuasion at length induced him to permit the introduction of a very fine pointed instrument, but it was scarcely within the urethra when all his apprehensions returned, and it was with great difficulty I could keep in the sound. Having pushed it on to the obstacle, I found this quite insurmountable, and the patient testified such extreme fear, and such intense pain, that I thought it right to suspend the operation for some hours, while, in order to avoid new difficulties, I determined to fix the bougie where it was, that is to say, just before the stricture. The patient only consented on condition that I should return every second hour to take it out if it created pain, or opposed the flow of urine, as he apprehended. According to my promise I came back in some hours. The patient had made water without difficulty, and the bougie readily entered the stricture. A few hours later still, it penetrated further, and before the day was spent, it had arrived in the bladder. Some days after it was replaced by another still larger. From thenceforward the treatment was continued without difficulty, according to the ordinary method of progressive increase in the size of the instruments employed. In fifteen days the patient passed urine plentifully, in a full and strong stream. This case was not lost on me; I concluded thence that it was necessary for the bougie to penetrate the stricture in order to accomplish its dilatation. I saw at once all the advantage the method thus pointed out possessed in the treatment of pusillanimous and susceptible patients, and also in all the cases in which we are not compelled by the urgency of the symptoms to overcome the obstacle immediately by the introduction of a sound or bougie. Since this case I have, consequently, put the plan in practice with a crowd of patients. The register of the Hotel Dieu swarms with examples of its success.

This vital dilatation, in fact, is so powerful, that we frequently find sounds penetrating into the bladder in two or three hours. The action is facilitated by turning from time to time the sound in the canal. Any form answers for the dilator. It may be a sound of silver or gum elastic, or a bougie with a tapering or rounded extremity ; it is all the same for the object in view. Nevertheless I give the preference to pieces of sounds, or gum elastic bougies, terminated by a rounded blunt extremity, and of a length proportioned to the depth of the obstacles. These substances present a smooth flexible body, which accommodates itself to the flexures of the urethra, and which do not project

beyond it so as to impede the movements of the patient. But whatever be the instrument selected when introduced to the obstacle, it is fixed by proceedings already well known. The dilatation thus produced is such, that the bougie frequently enters by itself, or requires but the least effort of the surgeon for its introduction. In the most unfavorable circumstances, this method at any rate makes room for the end of a conoid sound, and for the employment of the mechanical means which remain to be described. In the mode of dilatation now detailed, I believe there is nothing mechanical. I am convinced we must admit something like vitality in the process. I have already remarked at the commencement of this lecture, that there took place an abundant mucous secretion, which accelerated the passage of the sound. With respect to this circumstance, let us examine the phenomena which take place in consequence of the contact of some foreign bodies with the entrances of several living canals; the lachrymal points for example. The first effect of their contact is such a strong contraction of the edges of those points, that a very fine stylet cannot enter; but if it be repeated or continued, they quickly dilate, and receive the stylet they first rejected; and we almost invariably see on this occasion a mucous secretion about the lachrymal points. The same thing occurs with the urethra; occasionally the secretion is of a purulent form, sometimes so abundent that it frightens the patients. This discharge, however, always receives a spontaneous cure, either during the presence of the sound or after its removal.

To conclude this lecture, I may offer a few brief reflections applicable to the various modes of urethral dilatation. We may in every case, and in ten or twelve days at most, pass from the finest bougie to the largest sound; or, in other words, from the narrowest stricture to the widest state of dilatation, by augmenting daily the volume of the instruments left in the urethra. But the duration of this expansion is brief in proportion to the time taken to effect it, whence it results that we should not hastily seek the greatest degree of enlargement, but that we should on the other hand procrastinate its accomplishment as long as possible, for the duration of the cure is long in proportion to the time required to effect it. But the rapid dilatations of strictures are attended with still worse advantages, namely, intense pain, lacerations near the seat of the stricture, excessively acute inflammation, gangrene, destruction of the canal to an uncertain extent, — accidents, in short, identical with those which generally follow forcible catheterism. It seems that the tissue of these strictures, like all the other tissues of the animal economy, possesses a degree of extensibility which cannot be exceeded

without laceration, but which may be almost indefinitely increased by a slowly acting and insensibly augumented force. But whatever be the precautions adopted in the operation of the urethral dilatation, it is, unfortunately, in the majority of cases, but of transitory duration, and the stricture generally returns. These relapses have induced me to recommend the occasional introduction of a bougie, say every ten, twelve, fifteen, or twenty days. This precaution, and the presence of the bougie in the urethra for two, four, or six hours, or even for a night, either effectually prevents, or considerably retards, the return of the disease. — *Dupuytren's Lecture.*

On the treatment of Hooping Cough, by Frictions of Tartar-Emetic Ointment.

The *Bullētin Genèral* for October contains a very useful paper on hooping cough by M. Gouraud. The author recognises two forms of the disease, the inflammatory and spasmodic. In the first, the positive signs are sufficient to establish the diagnosis. In the second and most usual, we judge of the spasmodic nature of the disease by the absence of phlogistic symptoms, the nervous temperament of the patient, and the character of the prevailing epidemic. Passing over some particulars of minor value we extract the passages in which Professor Autenreith's celebrated practice is described :—

'The treatment of Professor Autenreith consists exclusively in frictions of tartar-emetic ointment, composed of lard one ounce, tartar emetic a drachm and a half. The epigastrium is rubbed thrice daily with the size of a nut of this ointment. On the second or third day the usual pastular eruption appears, and very frequently as this declines the genital organs in both sexes become covered with similar pustules, which however dry up of themselves without any treatment. The friction must not be discontinued on the first appearance of the pustules, but must be persevered in until ulceration commences around their edges. Under the influence of this treatment, which lasts from eight to ten days, the paroxysms of cough gradually cease without the development of any other symptom. Two conditions, however, are essential to the success of this treatment, first, the exact proportions of the ointment, and secondly, the choice of the epigastric region ; the latter, perhaps, because it is necessary to create a certain degree of irritation immediately over the insertion of the diaphragm. Autenreith has found this method infallible in two epidemics ; he did not lose a single patient, and reduced the course of the malady to as many days as it previously had

weeks. He used no other remedy at the same time. Many other German practitioners have also followed this practice, and, as always happens respecting new proposals, they differ as to its virtues. Henke, however, who is one of the first clinical authorities in Germany, draws the following conclusions from his own practice, with this remedy :—1. Autenreith's plan is very frequently efficacious, especially when internal remedies are devoid of action. 2. The pain and uneasiness produced by the ulcerations constitute a serious obstacle to the extensive employment of the method, partly from the irritability of children, and partly from the excessive tenderness of their mothers. 3. The tartar-emetic treatment is not applicable where inflammation coëxists with the hooping-cough. 4. Cases occur occasionally in which the method fails, although no inflammation is present.

From the preceding facts it is evident that in very severe and obstinate cases, or in peculiarly malignant epidemics, Professor Autenreith's system deserves very extensive practical investigation.

Scrofulous Ophthalmia.

For the removal of the opacities occasioned by scrofulous inflammations of the eyes, the ointment I have mentioned appears to be peculiarly appropriate. The high character which it sustains on the Continent of Europe, did not follow it to this country on its first arrival, and it fell into neglect. This arose wholly from the want of skill in its preparation, and want of care in its preservation. If the lard of which it is composed, be not entirely free from rancidity, and if the ingredients are not carefully levigated with a stone and muller, a composition is produced which will do more injury than benefit. — Professor Cutbush first pointed out to me the rapidity with which this ointment is decomposed when exposed to the light, and consequently taught me the necessity of keeping it protected from the solar rays. Since that time, I can keep Janin's ointment perfectly well from year to year.

I have no doubt that when the ointment is thus prepared, and thus preserved, it will acquire in this country the reputation which it has so justly borne in Europe.

The formula of Janin, I subjoin.

℞ Tuttiæ, ppt } aa. ʒ ij.
Armen. bole }
Calx. Hyd. alb. ʒ j.
Axung. porc. ʒ ss.
M. fiat unguent.

A small quantity of this ointment rubbed on the edges of the lids, several times a day, will produce a good effect in chronic lippitudo. — *Western Medical Gazette.*

Asthma United with Bronchitis.

There have been several cases presented this week, but I shall not have time to speak of the whole of them, therefore I will select one or two from the number. One of them is a case of asthma and bronchitis. The case is useful, as showing the necessity there is for the exercise of discretion in these cases; for if you do not make a distinction, you may employ medicines which, though very excellent remedies, will be used in vain, simply because they are not adapted to the particular form of disease which you have to treat.

A man, aged 46, a coachman, was admitted on the 25th of October, with pain in the chest, cough, difficulty of breathing, and short rapid inspirations. When he lay down, he was frequently seized with sudden fits of dyspnœa, especially during the night, and was nearly suffocated. He had frequent attacks of this sudden dyspnœa, and appeared to be relieved whenever he made a large quantity of water. Sometimes for days together he made a very small quantity, and then suddenly he made a very large quantity.

Treatment. — I gave him, at first, *tincture of lobelia inflata*, a drachm three times a day, and to be repeated every hour, whenever a paroxysm came on, until it disagreed with him, or the paroxysm went off. The paroxysms were relieved by this medicine very soon after he had taken it. Besides the paroxysm, he afterwards had continual difficulty of breathing, his pulse was constantly quick, and he was, more or less, feverish. There was considerable sonorous and sibilous rattle in different parts of the chest. It was therefore clear, that besides the spasmodic difficulty of breathing, there was now bronchitis, and although one might arrest the spasm temporarily by the lobelia inflata, yet one could not expect permanent good from it, nor, indeed, temporary relief for a good length of time. It was necessary, therefore, to have recourse to the remedies for inflammation. He was bled between the scapulæ to sixteen ounces, and took a scruple of ipecacuanha every morning. That is one of the best means for clearing out the bronchial tubes. On the 2nd of November it was judged right to cup him over the chest to sixteen ounces again, and in fits of dyspnœa he still took the lobelia inflata. On the 6th of November the disease still continued, but they were not so violent as when he came in. The lobelia inflata did not disagree with him at all, and he increased it to a drachm

and a half, when the paroxysm came on, as well as giving it three times a day. This dose made him very sick, and the paroxysm still continued as frequent as before. Had the case been solely spasmodic asthma, in all probability the lobelia inflata would have put a stop to it entirely. He continued all this time to take the ipecacuanha. As the lobelia inflata had now once made him sick, and had been taken in large doses, a small quantity had the same effect. It is very common with remedies when they have once disturbed the stomach, for smaller doses to take effect than what we formerly gave without any effect at all. He, therefore, now took only a half drachm every six hours, being always made sick with it. On the 30th it was found necessary to take a pint more blood, and on the 4th he was bled to another pint. The blood was buffed and cupped. The sonorous and sibilous rattle continued, and the bleeding not removing the symptoms, I was compelled at last to introduce mercury. He took two grains of calomel twice a day, and on the 7th his mouth was quite sore, and diarrhœa came on. He now only took the lobelia. Under all this treatment the paroxysms gradually became less frequent and less violent, and the man, on the 13th of December, was so well that he did not wish to stay in the hospital any longer. He was quite contented with the benefit he had derived, and therefore went out.

Now the tincture of the lobelia inflata has no effect, I believe, at all over the inflammatory part of the complaint. If asthma be united with bronchitis it does no good, except with regard to the spasmodic part of the affection, and it does comparatively little good even with it, because the disposition to spasm is kept up by the inflammation. You must adopt the common treatment for bronchitis, or you will do no good; but when the disease is of such a character that the paroxysm constitutes the whole complaint, if there be no great difficulty of breathing between the fits, no heat, and no quickness of pulse between the paroxysms, then the lobelia inflata is one of the best remedies that can be employed. Mixed cases like the present, require mixed treatment. You are aware that it is an American plant, and is used by the Indians for smoking as a sort of tobacco, and it resembles tobacco in many of its properties. It causes sickness, headache, giddiness, faintness, and it is very acrid as well as very narcotic. There are two sorts of tincture kept in shops; the one made with spirits, the other with ether. They commonly may be given in doses of half a drachm. Some people will bear a drachm; but I should say that half a drachm is the ordinary dose that people can bear. As for one etherial tincture, such as I have seen, seven drops answer exceedingly well. It may by some persons be made weaker than it should be, but that which we use may be given in doses of from seven drops to twenty.

Ten drops in many persons produces sickness. With many it acts as a charm, and in ten or twenty minutes they will be perfectly relieved, so that all the other remedies used in asthma are nothing to be compared with it. It is not in the Pharmacopœia, nor do I know whether it will be in the *new* Pharmacopœia, but it will be introduced ultimately, and will be considered one of the most inportant articles in the Materia Medica. It has been recommended in other spasmodic diseases, in tetanus, hydrophobia, and other diseases of the nervous system, and it is worth a trial in them, because our power over some of them at present is nothing, and over others very slight. I therefore think it a duty to investigate the properties of the medicine, and give it in cases where we have no remedies, or our remedies are not at all satisfactory. The Indians, I have just observed, smoke it, and that is a very good form of exhibiting it. It may, by means of a pipe, be smoked just like tobacco. Many find great relief from smoking strammonium, and this affords general relief. It is very mild, and is as pleasant as tobacco. But there is no necessity for it to be smoked, for a few drops of the etherial tincture answer every purpose. I believe I mentioned before, that some cannot bear it in any quantity, and that is just what we observe in tobacco. Some are made ill with a single whif, and some will smoke all day. Many persons are made sick with a single drop of the common alcoholic tincture of this medicine, and are altogether unable to bear it. — *Elliotson's Lecture.*

Medico-Legal Observations. — Infanticide.

The majority of females accused of infanticide, allege in their defence that they were ignorant that they were pregnant, and consequently a question concerning the possibility of such ignorance is frequently discussed in courts of justice. Several authors on medical jurisprudence have decided in the affirmative in cases where the woman has conceived either during her sleep, or in a state of intoxication, or while insensible in consequence of disease. Although the movements of the fœtus, and the other signs of pregnancy, should be sufficient in most cases to inform the mother of her situation, still M. Orfila, cites several instances of married women who had already borne children, and who had no motives for concealment of their pregnancy, and who nevertheless had arrived at the full period without the slightest knowledge of their condition. Those which I am about to mention, and of which I was a witness, corroborate strongly the opinion of the professor.

First case. — I was consulted in the month of August, 1819,

by a woman whom I had already visited on diseases of another kind, and who reposed implicit confidence in me. She was of the middle height and extremely thin, but her belly was so distended that she believed herself attacked with dropsy. After an attentive examination, I announced to her that she was pregnant, and she frankly told me she did not believe it, and she thought so, for the following reasons ; she said she was fortysix years of age, that she had ceased to menstruate at fortytwo, that since twenty she had lived in the capacity of house-keeper with a bachelor, that they had cohabited as man and wife ever since, always observing *precautions* (such were her expressions ;) however, for the four years since the menses disappeared, they considered these *precautions* unnecessary. She added that she had suffered none of the inconveniences to which pregnant women are liable, and that she had never experienced the slightest movement. That this female spoke candidly, is thus plainly seen. Six weeks after, I delivered her of a healthy well formed child.

The following case is more remarkable, because the woman, so far from employing any means to prevent conception, told me that for the thirty years she lived with her husband, their only cause of dispute was the want of offspring.

Second case. — In October, 1824, when I was at Rheims, a physician of that city, Dr Noel, brought me to see a lady, who for the preceding twentyfour hours had experienced intense and continually increasing abdominal pain. Low diet, hip-baths, and warm fomentations, had been tried without relief. Dr Noel informed me that he considered the uterus disease, as for the last six hours a sanguinolent discharge had taken place from the vagina. On our arrival we found the patient seated, and experiencing intermittent pains. She told me she was fiftytwo years old, and had been married thirty years, she always menstruated regularly, had never been ill, had no children, and had ceased to menstruate at fortyfive years of age.

On examination *per vaginam* I found the head of an infant passing out of the os uteri. When I announced the circumstance, great astonishment was occasioned to both the lady and her husband ; she said she had never perceived any increase of her size (she was rather fat,) that the volume of her abdomen was not enlarged, and that she had felt no motion. Two hours after the forceps was applied, and she was safely delivered of a healthy child, which she has since nursed. I should add that Dr Noel had only seen the lady once before we met, which fully accounts for that practitioner's mistake. — *Arch. Gen. de Medecine Fevrier*, 1831.

Tobacco in Suppressing of Urine.

There are a few cases, productive of more distressing feelings, both of a local and general nature, than those in which the evacuation of urine is performed with difficulty, or for a time totally suppressed. The young practitioner often finds himself much embarrassed on such occasions, and his success is always rewarded by the most sincere expressions of gratitude, if he fail to receive a more substantial remuneration.

There is no article, so far as I know, that gives more speedy and entire relief in these cases, than the decoction of Tobacco, made by adding one ounce of the leaf, to a pint of boiling water. — Ten drops are to be given to an adult every 15 minutes, increasing each dose one drop, after the second or third, until a slight degree of nausea is excited.

I have employed this remedy, in not a few instances, and always with decided advantage. The first time I saw it administered, was in a case of consultation with Dr Hartshorne of Philadelphia, who has long been in the habit of exhibiting it.

Western Medical Gazette.

Cause of Hour-Glass Contraction? —

Influence of Accoucheurs over Births.—Powers of the Ergot of Rye.—Contrast between the Midwifery of England and Ireland.

The President proposed for the consideration of the Society, a suggestion relative to the cause of hour-glass contraction of the uterus, founded on the following case, to which he had lately been called. A lady was taken in labor at a moment when no accoucheur was at hand, and the attendance of Dr Burne became a matter of necessity. The child was born hastily, and before his arrival, when, on proceeding to ascertain if all was right, he found that the uterus was as high as the navel, and hour-glass contraction apparent; the funis was detached from the placenta, in consequence of its being very short. He took the necessary precautions against the hemorrhage, and, accordingly none occurred during an hour, when Dr Merriman arrived, and the fact of the hour-glass contraction was confirmed. Ten or fifteen minutes then elapsed, amid serious apprehensions, before the placenta could be brought away. When a student, he had observed that this contraction in the uterus commonly followed either the sudden birth of the child, when no professional man was present, or the hurrying of the child into the world by an officious nurse, or its rapid expulsion by the uterus. This impression was strengthened by the present case, and he now

wished to know what the Society thought of the view, that hasty births were always the cause of hour-glass contraction. If they were, the remedy for this important evil would be a retardation of the expulsion, and the evil of rapid deliveries might be enforced, especially amongst female accoucheurs, who were particularly proud of rapid births. Their anxiety to have the child born in a moment was such, that the instant the head presented itself, they began to pull out the child, whether nature was helping them or not. He had no doubt that this was done in the present case. The attending nurse was a woman of some consequence, real and affected, — no other than the nurse who waited on the late Princess Charlotte — and took the merit to herself of having got the child born before any medical man arrived, though he (Dr Burne) could have told her that her great cleverness was a great misfortune. When speaking of a hasty birth, he meant a birth where the child was born at one instead of two contractions of the uterus.

The following debate ensued : —

Mr Gossett. Is it possible to retard a birth at all ? I doubt it.

Mr Burt. I do not think it possible.

Mr Dendy. Both artificial retardation and acceleration are possible. I have seen them produced repeatedly. The pains will sometimes expel the head so far out of the vulva, that I could get in my hand. The pain will then cease, and the head so return, that you can scarcely reach the vertex. Another pain will follow, and so much of the work of birth have to be performed over again. If in such a case I put my finger into the rectum when the head first comes down, and employ it to accelerate the delivery, I can certainly do so. As to delaying the birth, the possibility of that is very obvious. It is both necessary and practicable on all occasions, for instance, in which the laceration of the perineum is threatened. I might quote the cases cited by Dupuytren in a lecture lately published in this country on that subject, were the reference necessary.

Mr Hooper. I also agree that the birth can, where circumstances advise it, be retarded. In a recent case, where the head was coming down with a part of the funis beside it, I pushed the child back again, put the cord past the head, and the child was born in security. I frequently retard the birth. In fact, it is often wisely retarded by nature itself. The head often comes down first, and then returns, having aided the dilation of the parts, for the more easy accomplishment of the entire birth.

Mr Linacre. I always partially retard the birth by supporting the child with firm pressure, and never had either the hour-glass contraction or ten minutes delay of the placenta.

Mr Dimond. According to my experience, if the pains be

sufficient to expel the head and shoulders at one effort, you cannot, if you would retard the birth an instant; and if there be two pains, there is no occasion to do so. As regards the placenta, I have attended at least a thousand cases, and rarely had to wait ten minutes, and never twenty, for it. I never saw an hour-glass contraction.

Mr Gossett. I also think that no force which can be safely used will retard the birth. The efforts of the uterus are such, that the force of my arm would be inadequate to restrain them; they would be strong enough to eject me from the bedside of the patient, or out of the room.

Mr Burt. Has any gentleman ever found the ergot of rye to increase the after-pains? I have myself frequently known them to last violently for twentyfour hours in consequence of that medicine.

Mr Hooper. I am unacquainted with such an effect.

Mr Headland. The subject of the ergot being introduced, I beg to make a few remarks on its powers. I have great reason to be thankful for its application to practice, and consider that it has almost entirely superseded the necessity for turning. But it has also the important power of *exciting* labor; its efficacy in which, may be judged by the following case. I was lately called to a woman, seven months gone with child, who, in an attempt to get into the pit of one of the theatres, fell from the top of the steps to the bottom, and was taken home, suffering profuse hemorrhage from the womb, which so increased, that when I saw her, the case threatened to be fatal; and it was plain that if the child were not speedily brought forth, the woman must die. Dr David Davis was also sent for, and after a consultation, it was determined, that although pains had not occurred, no time was to be lost, and a proposal which I made to give the ergot of rye was adopted. A strong decoction was accordingly made, two scruples boiled ten minutes, and given, when cool, in a wine-glass, repeated in ten minutes, and again given a third time. Previous to this case I was never satisfied that the ergot would actually *establish* labor pains, but here it did so, for there were none whatever before. In ten minutes from the first dose they came on, the child was soon after expelled, and the woman, whose pulse had disappeared and seemed moribund, ultimately did well. I have had another precisely similar case. But an instance has since occurred to me, pointing out the necessity of more cautious application of this medicine. I attended a stout, strong lady, the wife of a barrister, who in the seventh month of her pregnancy, was attacked with hemorrhage so profuse, that it was obvious she could not safely be allowed to carry the fœtus any longer. Accordingly I gave the ergot to a very large extent.

Gentlemen may have seen in the German journals an account of several cases in which paralysis followed the extensive administration of this medicine. I found this effect produced in the present instance. The uterus was emptied of its contents, certainly, but immediately afterwards, numbness of the extremities, from the hips downwards, came on, and continued for five or six weeks. This was doubtless the effect of the large doses that I gave. But the cases I have mentioned, place almost beyond doubt the *specific* effect of the ergot on the uterus. I should mention, that in all these cases, I ruptured the membranes myself.

Mr Hooper. I am glad that this case has been related, for I have never been accustomed to use the ergot with the caution which I shall in future observe. The dose I usually give is two drachms of the strong tincture, and if that be not enough, I repeat it in a quarter of an hour. I provide myself with the tincture in preference, because the use of the ergot is now so well known, that if you proceed to make the decotion in the lying-in-room, the ladies suspect your proceedings, and commonly say, 'I know what you are at; you want to bring on the pains, but I wont take it,' and their refusal cannot often be overcome.

Mr Dendy. The ergot in my practice, has completely supplanted the use of the vectis. I find the infusion the most effectual, and if it be sugared, it may be given, without suspicion, as tea. In reply to Mr Burt, I may state, that I have certainly found the after-pains more severe from its use; but then they have been the sooner over, and the time gained in that respect, more than compensates for the temporary increase of suffering. As to the cause of hour-glass contraction, the suggestion of the President appears a probable one, but I have hitherto been inclined to think that it arises from a want of balance between the muscular power of the fundus, and that of the centre of the uterus, the former portion being in a state of paralysis, and the latter in a state of spasm. The fact that opium has overcome (as formerly stated in this Society) the hour-glass contraction, tends to prove the opinion as to the spasmodic contraction of the central fibres.

The President. But as soon as the contraction is overcome, the whole of the uterus contracts regularly. That does not look like paralysis of any portion. (The alleged effect of opium was also doubted by some members.)

[To be Continued.]

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"Itaque ad experientiæ et scientiæ istius cui inservio normam, mea omnia exigi et probari velim."—WILLIS.

ART. I. — OBSERVATIONS ON CERTAIN OBSCURE FORMS OF DISEASE IN THE THORAX, WITH CASES, FROM THE JOURNAL OF THE MASS. GENERAL HOSPITAL.

By JAMES JACKSON, M. D., *Physician of that Institution*

IT has frequently been asked why no reports were furnished of medical cases from the Massachusetts General Hospital. It may be well to offer some apology for the neglect complained of. It is true, perhaps, that the public have some claims on such an institution; but it is not an easy matter to meet such claims. To medical pupils this institution furnishes valuable means of instruction, while going through their education. It affords the means of an acquaintance with common diseases and their treatment. But it is not so large as to have a great number of rare or extraordinary cases; nor have the physicians, who attend it, ever made it a place of experiment on new medicines. If there has been anything peculiar in their treatment of the sick, it has been in the moderation with which they have used powerful remedies, in withholding drugs from the sick and in regulating their diet and regimen. There have not therefore been the means of furnishing for the public many striking and interesting cases. Much attention has been given to morbid anatomy; but to make the knowledge, thus obtained, useful to others, great attention is requisite in noting and reporting the phenomena during life and after death.

Undoubtedly, however, some interesting reports might be made from this institution. But the labor of making them is

very great. It is true that daily records are made of every case. But in so doing many things are noted, because they may be important, but which do not subsequently prove to be so; and the records are expressed in such terms as to be very intelligible to those who dictate them, and who know what force they mean to give to particular terms, but not so explicitly as to be fully intelligible to others. Hence a transcript of the records would prove both tedious and unsatisfactory to others. For publication it would be necessary that a case should be made out with care from the records.

It has been thought that the house-physician might do this. But this officer finds his time fully occupied in the performance of the duties assigned to him. Besides, young men, who hold the office of house-physician, are not competent to make out cases for publication. This remark must not be regarded as a disparagement of such young men. Physicians of experience find it a difficult task to present a case so clearly as to render its perusal useful to others. To avoid the tediousness of details, under which the essential features of a case may be buried, and yet to present with sufficient minuteness and precision the essential points, are the desiderata; but how rarely are they attained. I fear almost to make these remarks, as they may sharpen criticism upon the cases which are to follow. It is pretty certain, however, that these things will rarely be fully attended to, except by the physician, who has the patients under his care.

The duty of making these reports must then fall on the physicians of the hospital. With sufficient industry, they might no doubt, make out occasionally such reports as would be useful and interesting. But it is not a little industry which would be required of them, engaged as they are in the common routine of practice and in the common affairs of life, in addition to their labors at the hospital. Some about me may suppose that this excuse does not apply to me. But if I were willing to trouble others with an account of myself, I might show that my case was not an exception.

Having thus offered an apology for what has been thought a neglect on the part of my brother officers and myself; I now proceed to give the reports of some cases, collected during the last winter. In so doing, I am influenced quite as much by the desire to meet the demand I have referred to, as by the belief that these reports will be useful. Yet I would not give them, if I thought they would not be in some measure useful to our medical public.

I have selected for these reports cases of *pleuritis*, or inflammation of the pleura; but such as are not of a common character. I have selected these cases first, because the last winter, the season in which the hospital was under my care, has furnished an unusual number of them; and second, because I believe that they are cases which are not familiar to most physicians, though sometimes occurring to all.

It appears to me that few medical practitioners are aware how large a proportion of fatal diseases consists in part or in whole of affections within the thorax. The bones of the chest hide from view the morbid organs. In many cases their state cannot be ascertained without the careful aid of auscultation and percussion. Inflammation in them may exist without manifest symptoms, or without such as arrest the attention; and its frequency becomes known only to those, who are in the habit of *post-mortem* examinations.

In a well marked, and what is called regular pleurisy, the symptoms will not be overlooked. There is acute pain, aggravated by a full inspiration; there is consequent dyspnœa, increased on motion; there is cough, though with little or no expectoration. Likewise the skin is hot, the tongue furred, and the pulse hard and accelerated; while the appetite is impaired and the muscular strength greatly diminished. A patient with these symptoms is soon confined to his bed, or at least is disqualified for his common duties and labors. But in many cases all these symptoms are not present; and especially the constitutional symptoms may be absent. If a man, who is turning over the earth with his spade, turns round at the approach of a physician and asks what he shall do for his short breath; and after inquiry as to its nature and cause it appears that he has pain in expanding the chest, and this has happened ever since a heavy storm a fortnight before; the physician will be apt to think that this cannot be pleurisy, for that the man would have necessarily given up his work, if it were so. Yet in just this way has a man first made known to me a most grave case of inflammation in the pleura and lungs.

Possibly spasmodic affections and certainly rheumatic affections of the thoracic muscles may be confounded with pleurisy, if we attend only to what have been called the rational signs. But in such cases the physical signs will ordinarily relieve the doubt. And these signs are not difficult to learn. It is difficult and requires early study and much experience to distinguish the various affections of the heart and lungs by their

physical signs. This is not a reason why they should not be studied. But in pleurisy the physical signs are easily detected in most cases; not by one examination always, but after two or three examinations of a case. If there are instances in which we may be deceived or left in doubt, they are comparatively rare.

Ordinarily in pleurisy, when it has existed from two to four days, percussion will yield a flat sound in the part affected, the sound of respiration will be deficient, wholly, or in part, and the voice as heard at the part affected will show the characteristic *hægophony*. This last sign is thought to occur only when effusion to a certain amount has taken place within the pleura. An increase, or a diminution of the effusion may cause it to disappear. But when it is present, it is a strong evidence of the state of things within the thorax.

In the following cases the pleurisy did not at first exhibit such distressing and clear symptoms as to arrest much attention. To this remark there was one exception. Even in this case, however, there was not the prostration which we generally look for in true pleuritis.

Case I. Empyema and pneumo-thorax, the lung on the left side quite condensed, not admitting air.

Thomas Kelly, an Irishman, aged 22, died Dec. 20th, 1832, at day-break, and examined the same day.

The left thorax was greatly enlarged in every direction; measuring from the vertebræ to the middle of the sternum, at the largest part two inches more than the right. On removing the integuments the muscles in the left mammary region were found to be gangrenous and the corresponding portion of the pleura was the same. The left lung was compressed in the upper part of the cavity and against the mediastinum. In size it was scarcely double that of the first. It was fleshy, containing no air. Its consistence was not firm, and internally it was of a leaden color, seeming to approach a gangrenous state. It contained several tubercles, one of which was quite as large as a kidney bean; this was not softened, but had a very distinct cyst. In another the contents were paste-like; but no one had suppurated.

In the cavity of the pleura there were between three and four pints of pus, but the greater part of the cavity was filled with air. The contents of this cavity were of so offensive an odour that it could not be well examined, until much chloride of lime had been thrown into it. From the same cause the

examination was less minute than was desired. The whole pleura was covered with a dense false membrane, apparently organized, extending over the lung and the left side of the pericardium, as well as over the parietes of the chest. Within, or upon this dense membrane there was a loose, shaggy, false membrane, hanging like tatters into the cavity. This last, seemed to be recent, and to have been formed upon the old dense membrane.

The right lung adhered, by a loose false membrane to the diaphragm and ribs. On its front part, under the cartilages, it was of a dark, slate color, showing an approach to gangrene. This change penetrated the subjacent substance to some depth. Elsewhere the color was healthy and the lung crepitated, though the whole of it was compressed somewhat by the previous pressure on the mediastinum.

The pericardium contained more than the usual quantity of fluid. The heart exhibited no marks of disease.

The liver was somewhat indurated, and the spleen rather large. The other abdominal viscera were healthy.

Thus it appeared that there had been a severe pleuritis in the left thorax, with a sero-purulent effusion, compressing the lung and enlarging the chest.

This man entered the hospital on the 17th of October 1832. His story was briefly this. In April he was employed in digging a well, when he took cold. He had then a cough with soreness of his breast, and a shortness of breath. Yet he continued to labor for a month; but had not done any work since. He had been weak, but not prostrated, and was not obliged to keep his bed. About midsummer he noticed an enlargement of his chest, and he thought that both sides swelled at first. At this period he began to be much troubled by dyspnœa and a palpitation in the left breast. During the summer he had pain under the sternum and soreness in both breasts, but these symptoms had subsided. He had had very little medical advice. At his entrance and during the two subsequent months his state was as follows. He had constant dyspnœa and this was increased by every motion; yet his muscular strength was not prostrated. The thorax was greatly enlarged on the left side. Around the largest part the right thorax measured sixteen inches, and the left, eighteen. The intercostal spaces were swollen outwards. On moving his body to and fro there was a sound of fluctuation in the chest; and this was so loud as to be heard distinctly in any part of a large room, where he

was placed in one corner. On percussion the whole of the left thorax was flat, except the upper part; this resounded well. That is, when he sat up the imfra-clavicular region and that above the scapula resounded well, but the mammary region was flat; when he laid on his back, the mammary region at once resounded well. It was thus quite evident that there was some air as well as a liquid in the left thorax. The fluctuation of a fluid was distinctly felt when a hand was placed on the left breast, while he moved his body. There was not any metallic tinkling.

In the left thorax there was heard a slight murmur of respiration, especially in the upper half of the back. This was heard more distinctly at some later periods, so that it was not easy to believe that it was a transmitted sound. On the 9th of Dec. a slight sonorous rale was heard, on a forced inspiration, above the left scapula. There can scarcely be a doubt that this sound was transmitted. Hægophony was discovered at various periods near the lower angle of the scapula, but was not constant. In the right thorax the respiration was puerile, or supplementary.

The beating in the left breast was the subject of complaint with the patient quite as much as the dyspnœa. This last was relieved in good measure when he was at rest, but the other was a constant annoyance. The pulsation of the heart was communicated through the liquid; and probably it was felt by the patient more distinctly, because the sensibility of the pleura was increased both by inflammation and by the tension to which it was subjected. The pulsation was visible in the left mammary region; and in this region, in the side and around the scapula, an impulse with a jarring was felt through the stethoscope very distinctly. It was of course felt under the sternum. The sound was not remarkable anywhere. Probably the impulse was communicated through the liquid more than in simple hydrothorax, or empyema, in consequence of the presence of the elastic fluid, which allowed a free motion in the liquid. This explains why it was most noticed at the level of the liquid, just above which the existence of air was discovered by percussion. The cough was various; at times annoying. The expectoration was mostly serous or simply mucous; but occasionally opaque and sometimes a little bloody.

The patient could lie down without extra pillows; was most easy on the left side, but could easily lie on the back and

could usually rest for a time on the right side without much inconvenience.

He was not destitute of appetite; occasionally vomited his food when coughing, but commonly bore it very well, and was tolerably regular in his bowels. His urine was sometimes natural, but usually scanty, high colored and turbid, often depositing a lateritious sediment. His pulse was from 96 to 120. His skin was commonly cool, but at times hot; and at some periods he had profuse sweats. He had also at times severe chills. His nights were often tedious, but with opiates he sometimes had good sleep. He was emaciated when he entered the hospital, but never to an extreme degree. His countenance was less morbid than would be expected.

He had at times various pains about the chest, sometimes in the right half, oftener in the left. Sometimes he complained of a painful numbness across the breast. At one time he spoke of a sharp pain at the lower end of the sternum, with a sense of distention in the prœcordia and in the left side. He then felt as if he should burst in these parts. At times he spoke also of a sharp pain in the right knee; but this was the only complaint he made, which could be regarded as rheumatic.

In November, there was noticed an enlargement of the abdomen, without fluctuation; and an internal tumor in the left umbilical region, which was flat and apparently five inches in diameter. This tumor was somewhat painful.

He underwent various changes during the first two months of his residence at the hospital, being at times comparatively comfortable, but for the most part suffering much. He once left the hospital for a few days, but returned very gladly, as he was less comfortable elsewhere. Various remedies were employed, among the rest free vesication. This afforded him some relief. On the whole, his suffering was increasing in the first two weeks of December, and it was decided to draw off the liquid from the thorax. The operation for this purpose was performed by Dr Warren on the 15th of Dec. when nine pints of thin pus were discharged. During the operation he suffered very little pain or exhaustion. The sensation of relief was very positive, so that he passed the remainder of the day very comfortably and in good spirits. His night was restless, but in the morning of the 16th he continued to be very sensible of relief. At this time he was examined by the stethoscope in the left breast. There was not heard there any

murmur of respiration, unless very slightly near the clavicle. He was not examined on the back, or side, from an unwillingness to fatigue him. The tumor in the abdomen being looked for, it was found near the diaphragm, and was much less obvious than before. It was now clearly proved that it was the spleen which had been pushed down by the diaphragm in consequence of the load of matter above. The general prominence of the abdomen had been produced by the same cause, and had now disappeared. The circumference of the thorax was of course much diminished; but the precise amount of the diminution could not be ascertained on account of the necessary dressings and bandages. It should be remarked that during the discharge of pus from the thorax some air was drawn in through the trocar, though this accident was guarded against as much as possible.

On the morning of the 17th he remained comfortable, though his pulse was accelerated. It had been generally from 90 to 100 before the operation. On the 16th it was 108 and this day 120.

On the evening of the 17th he was much altered. His relief had lasted about fortyeight hours after the operation. Now he felt weak and restless; much dyspnœa had come on; he had a sense of tightness about the chest, which he attributed to the bandages, but which was not much relieved by loosening them; he had nausea and soon afterwards vomited; he often raised himself in the bed and then threw himself suddenly back again; his pulse was 130, and small.

All these symptoms were aggravated before midnight, and pain in the left side was added to them; his hands became cold and his countenance indicated extreme distress. He got very little sleep during the night and scarce any quiet, though some opiates were administered.

On the morning of the 18th he was greatly exhausted. There had been very little discharge from the wound. By inserting a director into it a pint of pus was discharged with some relief. More opium was given and some brandy and water. This he could retain on his stomach better than other things. Thus he was enabled to pass this day better than the night. The following night also was comparatively comfortable. Life was protracted to the morning of the 20th, and a little relief was obtained by the discharge of more pus twice on the 19th. But the strength failed constantly, the dyspnœa increased, and after some hours of insensibility, his breath left him.

It was sufficiently obvious when this patient entered the hospital, that his disease was an empyema, consequent on pleurisy. The presence of air in the cavity of the thorax was rendered certain by the physical signs. The presence of air with a liquid in the same cavity, was demonstrated by the sound of succussion of the trunk of the body. The metallic tinkling was absent, which was pointed out by Laennee as occurring in some similar cases; but this was because there was not any opening from the lungs into the cavity of the pleura. The remarkable pulsation in the left breast, with the extensive impulse communicated from the heart, was not so easily explained. I was disposed to attribute this to an induration of the lungs, the indurated portion being closely pressed on the heart by adhesion to the pericardium. This explanation did not however accord with some other phenomena. There was not any known disease of the heart, or of the aorta, which could explain the phenomena. It was not till after the death of the patient, when I found what a little remnant of lung there was in the left thorax, that it occurred to me that the agitation communicated by the heart to the pus would explain this phenomenon. It will be obvious that this motion in the pus would be very different when there was confined air present in the cavity, from that of a similar liquid filling the cavity entirely. As to the source of the air I leave others to form their opinion. I will only say that I was satisfied it was not derived from the lungs; and that the pus discharged during the operation was not at all putrid, though that which was found after death, and which was formed under different circumstances, had become so in some measure.

It is very certain that the death of the patient was accelerated by the operation. This result was feared; and therefore the operation was deferred until the increasing sufferings of the patient made it an object to obtain present relief even at a great risk. It was very certain that death must soon ensue without an operation. The patient was fully apprized of the uncertainty of the issue and willing to incur the hazard. I must confess, however, that I should not be disposed to repeat the operation in a similar case. Upon the discharge of the pus the parts which had been distended would close together in some measure so as to diminish the cavity; but the parietes could not, like soft parts, fall together so as to obliterate the cavity. The air within might be rarefied in some measure, and the play of the parts in expiration would aid in expelling

the pus through the wound. But it was almost inevitable that some air should be drawn in at the moments of inspiration. Thus, so far as the introduction of air into circumscribed cavities is injurious, evil would be produced in parts already morbid. If the lungs were capable of distention they might enlarge and fill up the space left by the pus. The difficulties in this will readily present themselves in the most favorable view of the case. But as the lung was permanently contracted in the manner that was feared, though not certainly known, this could not happen. Thus then the cavity was left in such a state that new inflammation was almost inevitable. This inflammation seems to have been established, at once, in the whole of the organized false membrane which lined the pleura; and it was violent in degree and rapid in its course. It commenced in about two days after the operation, and it destroyed life in less than seventy hours afterwards by the sympathetic irritation it induced.

Case II. Empyema and pneumo-thorax, the lung admitting some air.

John Sproul, aged 19, ropemaker; entered the hospital Dec. 25th, 1832. Hair, eyes and complexion very light, and frame very slender. He died Feb. 8th, 1833, 4 P. M., and was examined the next day, 10 A. M.

The thorax on the right side was enlarged, being deeper from front to back than the left. In its cavity there was about a pint of thin pus; or rather there seemed to be a watery fluid only till it was disturbed, when some pus which had settled at the bottom was stirred up and mixed so as to give the appearance of thin pus. The cavity of the pleura on this side also contained much air. The lung was in a good measure condensed and covered with a thick false membrane. It was lying against the mediostinum and in the upper part of the thorax, as if it had been compressed. There was, however, a portion of it drawn across the cavity. This adhered to the third rib, opposite the axilla. This adhesion was at a small point, not an inch in diameter. A portion of the lung was drawn out in a funnel, or conical form, from the main body, and stretched to the point of adhesion, the base of the cone being in the lung. At the point of adhesion there were in the lung three cavities, communicating with each other. These seemed to have been softened or suppurated tubercles. These cavities had the false membrane, by which the adhesion to the pleura pulmonalis was effected, for the parietes on that side. As

the cavities were not discovered till the adhesion was destroyed, it was not ascertained whether there was any small opening from them into the cavity of the pleura.

The compressed lung admitted air into the lower part and into the centre of the upper part; but most of it was indurated and contained small, hard, white bodies, generally smaller than a pea. I do not call these tubercles, though I do not deny that they were so. I rather thought them to be portions of coagulable lymph.

The left lung was healthy. The pericardium contained about six ounces of serous fluid. Its loose portion was reddened but not thickened.

At his entrance, Dec. 25th, the most striking circumstance in Sproul was his weakness. He seemed to be weak in body and mind, in his motions and in his voice. He could get out of bed, but he preferred to stay in it. He was of a spare habit, but evidently had had previously more flesh than he had then. He said he had been sick four weeks, but in seeking an account of his early symptoms nothing very definite could be learnt. He said that at first he was weak, lost his appetite, grew thirsty, but that he had not chills, nor pain. He had some cough at first and this continued, but he laid very little stress on this symptom. The cough had been almost without expectoration. At his entrance his lips and teeth were dry and his tongue had a coat of a dark, yellow color. He sweat much in the night. Pulse 84 to 90, small and not hard. No dyspnœa.

The physical signs discovered in the first week after his admission were as follows. The right thorax, generally, was flat on percussion, but this was not perfect in the breast, near its upper part. In this part, especially below the second rib, a slight vesicular murmur was heard, but mixed with an occasional bronchial sound, especially on full inspiration. Over the right back, and in the axillary region, there was heard a bronchial sound, or a sound like snoring; but this was not constant. Rather low in his back there was hægophony. This was not noticed distinctly except once or twice, but frequently a peculiarity in the voice was noticed in the right thorax, at different points.

In the left thorax there was sometimes a supplementary respiration, but generally the physical signs were natural.

During the first three weeks there was some amendment; the appetite and strength increased a little, but not the flesh.

From the 14th January he was not so well. His cough was at times worse, he felt more weak, he had occasionally pain in the right breast and dyspnœa gradually supervened. From the 18th of Jan. there was noticed something peculiar in the right breast, in the axilla, and a little behind the axilla. In these parts there were *rales* which seemed to be various and mixed. The sound was described as creaking, as a sonorous rale, and again in the same spot, or near it, as a crepitous rale. At some periods a slight tinkling was heard by different persons, and oftener a sound like that from a viscid liquid boiling in a cauldron. The tinkling was not the metallic tinkling, which I have heard in pneumo-hydro-thorax; but more like that in a large abscess, half full. The other sounds led to a suspicion of the same thing. Yet the absence of purulent expectoration showed that such was not the case. Since the state of the lung has been ascertained, it has appeared to me probable that, in the different positions of the patient the liquid in the pleura was at some moments pressing more and at some moments less upon the portion of the lung which adhered to the third rib. It is probable that the fluid was more abundant at the period of these phenomena than at the time of death. The patient was usually placed in an erect position, when examined, yet he stooped at one moment and inclined to the right, or left side, at another. If we suppose that the liquid was just so much as to rise above this portion of lung in one position and to fall below it, or to encompass one half of it at others, the phenomena might easily be explained. In this case we could account also for the frequent variety in those phenomena, a circumstance which puzzled me very much during the life of the patient. The explanation is that the lower portion of the lung, which received air, was playing upon the surface of the liquid and produced sounds in that liquid, which were mixed with those occasioned by its own morbid state, and were communicated from it through the liquid.

From the 1st of February the peculiar sounds in the axilla were not discovered, though it was observed that some respiration was going on there and none in other parts of the right thorax. The hægophony was lost before this time. From the first of February the patient was sinking and dyspnœa was more obvious and at times urgent. Yet his life would have been protracted longer if he had not had any disease other than that in the chest. On Feb. 7th an erysipelatous inflammation was discovered on the left hand and wrist. This

spread rapidly up the arm and the strength sunk under it. It was accompanied by great pain as well as exquisite tenderness. He died the following day at 4 P. M.

In this case vesication and mercurials were employed, but neither of them were pursued very vigorously, as they did not appear to afford relief. Cordials were allowed occasionally as called for by the taste and feelings of the patient.

The only remark, I have to offer on this case, is on the absence or obscurity of the common symptoms of pleurisy at its commencement. Even when the patient entered the hospital the disease would not have been discovered without attending to the physical signs.

Case III. Empyema, pneumo-thorax, and scirrhus œsophagus.

Edw. Balfour, aged, 32. A gardener from Scotland; died at 6 P. M., January 7th, 1833. The body was examined the next day at 10 A. M.

The thorax only was opened. In the organs contained in the thorax there was much disease. The appearances will be stated not in the order of examination, but in that which probably accords with the origin and progress of the disease. The solid contents of the thorax were removed and kept in water several hours before they were examined.

The œsophagus was healthy, until it reached nearly the bifucation of the trachea. At this part was found a diseased mass, which extended downwards 5 or 6 inches. This may be called a scirrhus mass. It was hardened, with a cartilaginous feel, and various in thickness. At the upper part it surrounded the œsophagus, and seemed to compress it, but this tube was not there involved in the morbid change. About an inch below the bifurcation of the trachea the œsophagus had become much enlarged, and its parietes had the scirrhus structure. They were about one third of an inch in thickness. The internal surface was irregular and was covered with sero-purulent matter. It had the appearance of ulceration. The pouch thus formed was quite irregular in shape. Around this diseased mass and involved in it, were several enlarged glands, probably the bronchial glands. At the lower part the adjacent portion of the right lung was involved in the diseased mass and adhering to it. This portion of lung was at least very much indurated, and was about the size of a man's fist. There was an ulceration extending from the œsophagus into this portion of the right lung. This opening was wide, where

the lung adhered to the œsophagus, but grew narrower in passing posteriorly and laterally through the lung. The opening extended quite through the lung, making a free but not a large communication from the œsophagus to the cavity of the pleura. But as the parts had been much handled before this point was ascertained, it is possible that the external opening did not exist during life. The appearances however led me to believe that it had existed during life.

The middle lobe of the right lung adhered to the ribs by an elongated and thickened cellular mass, which was indurated or scirrhus where it was attached to the ribs. In the cavity of the right pleura there were, by estimation, above four pints of turbid serous fluid. This lung was not indurated except at the posterior part, described above, but in some parts it crepitated very slightly. It had been compressed by the fluid around it. The mucous membrane of the bronchi was thickened and red as far as the third order of those vessels.

In the left lung the same appearance was found in the mucous membrane as far as this could easily be traced. This lung crepitated well and was healthy in appearance. In the cavity of the left pleura there was about half a pint of serous fluid.

The pericardium contained rather more fluid than usual, and on its surface there were some very limited marks of disease.

This examination was made under very unfavorable circumstances, but it is believed that the important facts were ascertained. It is probable that a more accurate knowledge of his previous history, than we obtained, would throw more light on the case.

This patient entered the hospital on the 29th of Dec. 1832. His aspect was very morbid and rather haggard, but not like that of an intemperate man. His prominent symptoms were great dyspnœa, not permitting him to lie down; severe and harassing cough; expectoration watery, with some viscid, but not opaque mucus; soreness in both sides, most in the right, where there was also pain, aggravated by cough. The respirations were very frequent and accompanied by a loud mucous rattling in the throat. He had no appetite for food, and no urgent thirst. When he swallowed anything it seemed to stop on the way, below the pharynx, and presently it was rejected. This was not constant, however, nor did he report it on his entrance. When it was discovered he said he had been apt to vomit of late; but it was not ascertained how long this

had been the case. It is probable that it had begun gradually, and had increased of late. His tongue was slightly coated and white. Pulse 116 the first day, afterwards about 100. At his entrance he complained of beating of the heart, but not much afterwards. His muscular strength was not prostrated; that is, he could easily get out of bed and sit in a chair to be examined.

In the right thorax the respiration was quite audible in the infraclavian region, just audible in the mammary and upper half of the scapular regions. In the other parts it was not audible. In this thorax he was flat on percussion, except in the upper parts; and even there, did not resound perfectly.

In the front part of the left thorax and in the trachea some sonorous rale was noticed.

His most easy position was nearly erect and on the right shoulder rather than on the side. When lying on his back, or on the left side the dyspnœa became too severe, and he could not expectorate anything.

On the 1st of Jan. 1833, it was noticed that the right thorax was enlarged, but not in all its parts. It was only on the back from about the fifth rib downward. In this part the ribs seemed to have been bent, or to bulge outwards. On examining the voice no hægophony was discovered; but in the enlarged part of the back all sound of the voice was gradually lost in going from the upper to the lower part. At the upper part of the right back a sonorous rale, or a sound like snoring in a deep sleep, accompanied the respiration. This was gradually lost in going down the back, yet it was heard low down, as if it was the snoring of a person in an adjoining room. The same sound was heard in some measure in the left thorax; and likewise when standing by the patient it was sometimes heard in the throat. His voice was slightly hoarse.

In the course of the disease the vomiting became more constant and distressing. Also the expectoration was sometimes a little bloody with slight appearances of pus.

On the 3d of Jan. his cough and dyspnœa continuing urgent and having gradually increased, he was bled to ʒ xij with the hope of palliating his suffering. The pulse was somewhat hard at this time, but not full, nor strong. He did obtain some sensible relief, and yet the pulse was more decidedly hard the next day. He was then bled again to the same amount. Some relief, though less than before, followed this evacuation, but it was only for a few hours. In the subsequent night his dyspnœa increased, and sleep was prevented by that and by

the urgent cough. Every attempt to swallow was followed by an aggravated cough, and presently by vomiting. Though the liquids he took seemed to pass down perfectly, he said that he felt them stop and lodge in the way.

He continued till the evening of Jan. 7th, when he died, in the full possession of his intellectual faculties, after a day of much suffering. On the 5th he complained most of the palpitation of his heart, but in general he said little of this after the first days he spent in the hospital.

It is most probable that the disease in the œsophagus had existed many weeks and perhaps months; that an ulceration took place through this and through the adhering portion of the right lung; and that an escape of some liquid through this opening into the cavity of the pleura had given rise to the pleurisy, which proved fatal. This would be analogous to the more common cases in which an ulceration through the lung and a discharge of matter into the pleura occasions pleurisy. It is remarkable that in these cases the disease is less distressing and less rapidly fatal than peritonitis when produced by ulceration through the intestines.

I have now to present three cases, which were not fatal, but each of which differed from the common cases of acute pleuritis. They may all be called cases of pleuritis ascertained by the physical signs. It is true however that the rational signs existed in a greater or less degree.

Case IV. Joseph Lovell, aged 37, a carpenter, entered the hospital on the 17th of Dec. 1832. He had been sick a fortnight. On the evening of the 3d, he was attacked with pain in the left side, which became very severe before morning. On the 4th he was bled very copiously, (he thinks a quart) and was also purged and blistered, without relief. Since that time the pain has abated, but is yet very troublesome. The pain often passes up to the shoulder and becomes very severe on coughing, sneezing, or full inspiration. He coughs very little and has almost no expectoration. Tongue moderately covered with a white coat near its root, very little in front. Appetite sufficient, no trouble from food, bowels regular. Pulse 80. Countenance not morbid; muscular strength not much impaired. Motion causes some dyspnœa; but when at rest the respiration is natural or nearly so.

On percussion the sound is flat on the left back below the scapula.

On auscultation the respiration is not loud anywhere, but

least audible on the left thorax. Hægophony very distinct below the left scapula and in the left side.

On the 18th he began to take every night one of the following pills.

℞. Antim. Tart. gr. j
Pulv. Opii gr. ij.
Hydr. Subm. gr. x
Muc. G. Ar. Q. S. m. f. pil. No. vj.

He was vesicated on the same day and again on the 22d, on the left back and side. On the 26th his mouth was sore, and the pills were omitted. At this time the blisters were very sore, not permitting much examination, but it was ascertained that there was no hægophony on the back. After this time however there was some recurrence of the pain, so that mercurials were resumed and he was again vesicated; he was, however, evidently better, so that it was not easy to keep him in the hospital. On the 5th of Jan. 1833, he was free from pain, and his appetite being urgent some animal food was allowed him. On the 7th he was discharged well.

Case V. Ann Creeley, aged 39, married; entered the hospital Oct. 27. She has not enjoyed good health for several years, being easily fatigued on exercise, especially on walking up stairs. This is partly accounted for by the existence of a crural hernia. She has been particularly sick since last spring, when she took cold, had pain in left side, and cough. She then was under medical treatment, and obtained relief so far that she attended to her domestic duties through the summer. About six weeks since there was a re-occurrence of pain in her left side and shoulder, and a fortnight since her cough became aggravated. Now she coughs much; her expectoration is frothy and watery; she has sharp pain shooting from the lower angle of the scapula to the iliac region and in some measure to the top of the shoulder. This pain is aggravated on motion. Her breath is short; pulse 88; appetite small; some uneasiness in bowels; now, and habitually rather costive. In the left thorax the sound on percussion is flat, and the respiration is not audible except at the upper part; even there not full and natural. In the right thorax the respiration is supplementary and the resonance on percussion is natural. In left back there was hægophony, which in this and many other cases is characterised to me by a nasal sound more than by that of the bleating of a goat. Perhaps, however, my ear is not

sufficiently accustomed to this bleating, as goats are so rare with us.

She was put on a moderate diet, kept mostly in bed, the bowels were regulated, and a stimulating plaster was applied to the left back, which occasioned an inflammation of the skin. Under this treatment at the end of ten days she was better; the pain and dyspnœa had lessened; her cough was less urgent and the watery expectoration diminished; pulse 72; appetite mended. But on the 7th Nov. she was disposed to be chilly. On that day she commenced the use of the following medicine, taking one pill every night.

℞. Antim. Tart. gr. j
Pulv. Opii gr. ij
Hydr. Subm. gr. x
Muc. G. Ar. Q. S. m. f. pil. No. vj.

This pill sometimes occasioned nausea, and under its use she had hemorrhoids, followed by headache. But she continued it till Nov. 22d, when her mouth became sore. Nov. 24th the respiration was audible in the left scapular, infraclavian and mammary regions. Hægophony was still perceptible at the lower angle of the scapula, but not elsewhere, as it had been previously. Nov. 25th she was found, for the first time, at the hour of visiting, out of bed and dressed; and for several days her whole aspect showed that she was mending. But on this day her mouth was much better and she was ordered to take every night three grains of the Pil Hydrargyri. This was omitted on the 29th, because the mouth was more sore. Dec. 2d, hægophony was no longer perceptible, but on that day there was some recurrence of pain low on the left side, which had before ceased. For this she had a stimulating plaster and shortly was relieved. On the 11th of Dec. she walked abroad, and on the 13th was discharged well. At this time she had recovered flesh and strength, and the digestive functions were well performed. She was also free from cough and dyspnœa. The left thorax did not, however, resound well in the lower half, nor had the murmur of respiration returned there.

Case VI. Caroline Jones, aged 23, tailoress; unmarried; entered hospital Nov. 13th, 1832. Hair and complexion light. Able to sit up, but more comfortable in bed. Has dyspnœa and pain in left thorax. The pain is most distinct from scrobiculus cordis around the cartilages and lower ribs on left side, extending to back; but it spreads somewhat to the ilium below, and upwards to the shoulder. She has also dyspnœa, and sometimes is obliged to rise up in the night on this ac-

count. She cannot lie on the right side. Respiration 46 in a minute. She coughs somewhat, but expectorates very little. Pulse 120, small. Skin moist. Thirst, but no appetite for food.

She had the scarlet fever in June last, and that was followed by swelling of the lower extremities and by weakness, from which she has never fully recovered. She has, however, been engaged in her regular work till the 9th instant. She had felt the pain in the left side occasionally since her sickness in June, but it has been much more severe of late, and several days before she left work, she could not raise an article of clothing by her left arm without pain. The cough has come on within two or three weeks.

On percussion the left thorax was flat, the right resounded well.

On auscultation the murmur of respiration was supplementary over the right thorax; in the left it was heard only at the upper part.

When she spoke hægophony was perceived on the left back, most distinctly just below the lower angle of the scapula. The pulsation of the heart was more to the right than natural.

She was vesicated on the left thorax on the 14th, and the next day the respiration was easier, she coughed more, pulse 108, and she had slept better than before. She was the same on the day after, when the following medicine was prescribed.

℞. Antimon. Tartar. gr. j
Pulv. Opii. gr. ij
Hydrarg. Submur. gr. x
Muc. G. Ar. Q. S.
M. f. pil. No. vj.

— Let her take one pill every night. For diet she had gruel and a little bread, with a baked apple, when she wished it. Her bowels were kept open by gentle laxatives, when needed.

On the 20th it was noted that the hægophony was peculiar. The voice was attended by a puff, rather than a bleating sound. On this day her blister having healed she was vesicated anew. On the 21st her pulse was 96, still very small, and continued so afterwards. On the 22d in was discovered that her mouth was sore, and had been so on the 21st. The pill was discontinued.

On the 23d she reported better, but felt weak, was anxious for meat, and a little was allowed her. She mended in her strength and general appearance; and her dyspnœa, with pain in the left side, subsided. The hægophony continued. On the 25th she was allowed rice and milk at her request.

On 2d of Dec. the hægophony could not be heard. Her convalesence was not without accidental interruptions, but on the 13th of January she was discharged, as well. Up to that period however she continued to be flat on percussion on the left thorax, except at the upper third, and she had a sense of weakness on exercise in the left side and arm. Yet the re-establishment of the digestive functions, calmness in the circulation, ease in respiration, with the recovery of flesh and general strength, justified the opinion that she was well.

Art. II. — Editorial Correspondence.

[One of our number has lately made a hurried visit to some of the principal cities in Europe, and has sent home familiar sketches of their medical institutions, distinguished physicians, hospitals, &c. They contain fresh and authentic accounts of objects and occurrences which interested him chiefly as a physician. His colleagues have read them with much pleasure, and are happy in being permitted to offer them to the readers of the Magazine, who, we hope, have ere this, become sufficiently interested in their editorial friends, to participate in our gratification at the safe return of our itinerant colleague] E.

Paris, Nov. 10th, 1832.

My Dear F.

This city is to the physician what Rome is to the man of taste, the spot where is concentrated the greatest collection of objects for the gratification of his ruling propensities. The cultivation of medical science is here not impeded by those prejudices which are so embarrassing to us and the English. Indeed it is remarkable how little gloom is cast upon a Frenchman's mind by the unalterable realities of disease, a hospital, death and dissection. It is from the perfect facility of observation in the French hospitals, that they have become the best schools in the world for the study of diagnosis, and if men can be found in the world capable of pronouncing with certainty upon the distinctive character of diseases, they may be found among the veteran physicians of the Parisian hospitals. I shall not trespass upon the rites of hospitality and friendship by introducing into letters, which may meet other eyes than your own, the names and private histories of individuals. But I know men who have devoted the whole of their time for

several of the best and busiest years of their lives to the process of simple observation in the wards of these hospitals, and recording daily the minutest facts connected with the history of every case brought into the wards. These are the real working men of our profession, and when the minuteness of some of their observations tends to provoke a smile, let us remember that the only truly philosophical way to study natural history, of any sort, is, by a strict scrutiny of *all* the phenomena relating to each subject. It requires greatness of mind to brave ridicule, and this is what every man has had to do who has distinguished himself in natural history.

One of the great advantages of Paris, as a place of study is, that every thing is *classified*, and the man of science finds concentrated in one spot, all that relates to an individual subject. In the hospitals, you find the majority of the surgical operations at the Hotel Dieu; the pulmonary diseases in the wards of La Pitié; the diseases of children, at the Enfans Malades; cutaneous diseases, at St Louis; and syphilis, at the Midi. These hospitals have been so often described that I shall not trouble you with a repetition; but I cannot help remarking upon the excellence of the attendance upon the sick. It gives one a better opinion of human nature to see the devotedness with which the 'sisters of charity' apply themselves to the care of the patients. They are the most intelligent, the most faithful, and the most cleanly of nurses.

At La Pitié, the diagnosis of diseases of the chest is carried to its utmost perfection. The stethoscope is here not in much request, but *immediate* auscultation is principally used. After practising it several weeks, I am on the whole convinced, that when the ear is closely applied to the chest, the sounds within the chest may be at least, as well distinguished as when the stethoscope is used. But it is obvious that there are some parts of the chest to which the ear cannot be closely applied; as for example, above the clavicles in front, and also that the fastidiousness of patients in private practice, would be an impediment to the use of immediate auscultation. To use the stethoscope with dexterity also, it must be used constantly, and I think, therefore, we must submit to the tax of being obliged to carry about with us, in private practice, the invention of Laennec. Instead of the pleximeter of Piorry, which we have had of late years screwed on to the end of our stethoscopes, they use, entirely, at La Pitié, to receive the blow in percussion, the two first joints of the forefinger of the left hand. This I have

found to be an improvement, and a very great convenience. — One of the clearest and most intelligible accounts of the phenomena of auscultation of the organs of respiration and circulation, is that given by M. Andral, in the 3d vol. of the Dict. de Medicine, et Chirurgie practicale, of which, as the work is very little known with us, I will send you an abbreviated translation. In the autopsies which occur daily at La Pitié, is furnished the most ample proof of the value of auscultation and percussion, as means of diagnosis, and I am more and more convinced that these modes of investigation are not overrated.

It is remarkable that with all the zeal manifested by the French in the study of pathology and the frequency of autopsies, there should not be in Paris a single respectable collection of pathological specimens. When I expressed my astonishment at this to a distinguished hospital physician, he replied that pathology was better studied in the dissecting room, and that the frequent opportunities of inspecting morbid structures in their recent state, entirely superseded the necessity of a collection of preserved specimens. But surely this reasoning is erroneous, and both methods of observing the changes produced by diseases, may be advantageously resorted to,—the pathological museum to initiate the student in elementary knowledge, by examining the different alterations of texture side by side, and the autopsies to exhibit to the practitioner the connection between these alterations and the symptoms observed in the progress of the fatal disease. There is still another mode of preserving morbid appearances for the purposes of elementary instruction, which is too little valued. I mean by drawings and colored engravings. This has been most successfully done by Dr Carswell, professor of pathological anatomy in the university of London, who has devoted the whole of six years to the delineation of those morbid alterations, exhibited in the subjects examined in the dissecting rooms in Paris, and who is about publishing a series of colored engravings, copied from a selection of his admirable drawings. I have no doubt this work will meet the encouragement which is due to the industry and ability displayed in its execution, and especially in our country where the science of pathology is beginning to assume its relative importance. One of the most remarkable differences between the condition of pathological pursuits in London and in Paris is, that the scarcity of anatomical subjects in the former place, has led to the preservation of a vast number of most curious morbid specimens, and

to the construction of museums which perpetuate the names of some of the most talented *working men* of our profession.

One of the most interesting hospitals of Paris is that of St Louis. It is probably the only one in Europe where cutaneous diseases can be well studied. There are about 200 beds for patients with skin diseases, in the wards of this hospital, and you have the opportunity of observing specimens of almost every variety of these diseases, with the same facility that you can go over the classification of plants in a botanical garden. It is here that one learns to value the classification of Willan and Bateman, and to estimate properly the accuracy of the descriptions of Biett in the excellent work of Cazenave. The *interne* of this department of the hospital is preparing a work on diseases of the skin, and I know of no person so well qualified to do justice to the subject. To an admirable talent for observation he unites a very extensive experience and a minute acquaintance with the labors of others.

Notwithstanding the multitude of attractions which Paris presents to the medical practitioner, I shall be able to devote only one month to this city at present, intending to pay it another visit in the spring. The climate is severe, even to a New Englander, and I am anxious to be moving south in search of milder climes. There has already been one fall of snow, which lasted for several hours, and every day produces a plentiful drizzle of cold rain, so that I find the necessity of being provided with great coats, umbrellas and overshoes, as much as in our own despised climate. During my progress through Italy, I shall make it a point to visit the most interesting medical establishments, and as these are not as well known as those of Paris, I may inflict upon you, from time to time, some account of those which interest me most.

Yours, truly —

P.

Art. III. — St. Augustine, (E. F.) as a Resort for Invalids.

To the Editors of the Medical Magazine —

I was gratified to notice in a late number of your periodical, a promise on the part of its conductors, to make some remarks hereafter on the value of the West Indies as a retreat for the invalids of northern climates. It is to be hoped that this de-

sign, so important and interesting, may be extended to a consideration of those parts of our country, especially its southern section, which have been recommended for this object. With a view of adding something to the common stock of information on this topic, I am induced to give you some account of a situation which has of late years attracted no small degree of attention, as a resort for pulmonary invalids, the city of St Augustine, in East Florida.

You will accord with me in the observation, that one of the most difficult, perplexing, and responsible duties which occurs to the practitioner in his connection with invalids suffering under consumptive maladies, is to give a proper reply to the inquiry so often made him, as to what place or climate he would recommend a removal, to escape the severities of our northern winter. Though the physician may be convinced in his own mind of the exact equality of all places and latitudes, as far as ultimate recovery is concerned, that is, of their absolute inutility, in regard to fortynine fiftieths of all who may seek a change, he is aware that such is the exhilarating, flattering character of consumption, so almost pathognomonic of its tuberculous variety, that the suffering individual will not be guided by advice to remain at home, and die surrounded by all the comforts and alleviating circumstances which that can afford. The infatuated individual is frequently *sure* that sea-voyaging, change of air, and avoidance of our inclement atmosphere will effect a cure, or at least prolong and alleviate existence.

It then becomes a matter of importance to the medical adviser, to decide what situation possesses fewest disadvantages, and on such decision the comparative comfort or misery of his patient's last days is suspended. This selection is not easily to be determined, and that mainly from the fact that he has generally to rely upon the statements of interested, and too often unprincipled individuals, for the material upon which his judgment is to be grounded. The miseries and sufferings of the sick are made the subject of a most cruel, deceptive, but often profitable speculation. Puffing circulars, newspaper statements, treatises, &c, are sent abroad calculated to enkindle hopes which, it is hardly necessary to say, are perfectly illusive. Exaggerated, one-sided statements and views of every new place of resort for the invalid who has wealth sufficient to render him regardless of expenditure when health is at stake, and at the same time an object worth plucking, are thrust into every sick man's hand; no matter whether to de-

tail the comforts, conveniences and advantages of some fashionable watering place, the powers of some newly discovered Bethesda of mineral waters, or some El Dorado of a climate, boastingly represented to possess properties hardly less wonderful than those of the fabled fountains, whose reputed powers of renovating and restoring decrepid old age to the beauty and strength of youth, led to the original exploration of Florida.

The place to which I have referred, like all the settlements on our southern frontier, has been the occasional place of resort for northern invalids from time immemorial, but it is only since the change of flag in 1821, that any considerable numbers have visited it, and only within the last four or five years that much attention has been directed to it, as possessing any peculiar advantages over the southern states generally. This late notoriety is justly and almost entirely ascribable to the efforts which have been made to attract public attention and create an artificial reputation for the place, by the publication of such statements and circulars as have been alluded to, which have been very extensively circulated throughout the New England and middle states. In fact, of about one hundred invalids who were there in the winter of 1830-1, I had from personal acquaintance, reason to know that more than three quarters were immediately induced to give it the preference from the influence of these accounts.

In the present communication the writer regrets that many of the statements heretofore made to the public must be directly controverted. He would however premise that he does not intend to call in question the veracity of those who have given different views, many of which he is aware were predicated on supposed authentic data, the real errors of which will be pointed out, while other flattering conclusions were drawn and published after so very limited residence and research, that subsequent more extended opportunities must have shown the writers how much they were themselves deceived, and how much in turn they had misled the public. * I can pretend to

* The late Dr James Cox, who left Philadelphia, and settled in practice at St Augustine, the climate of which he, it would seem, vainly supposed, had cured him of a chronic bronchitis under which he labored, and whose circular giving an overrated account of the prospects of that place in pulmonary maladies (though his statements were far from being so exaggerated as those of some others,) were widely spread in the Journal of Health, N. A. Med. and Surg. Journal, &c, had the magnanimity to declare that, had he known as much of the climate of Florida at the time of publishing his circular, as he subsequently learned, nothing could have induced him

offer, as respects the climate, only the results of personal experience during one season, and that no doubt one of rather unusual severity, but I took every caution scrupulously to avoid all error in my own observations as well as to corroborate every statement heard, as to the inclemency of former winters, by inquiries among *unprejudiced* and *uninterested* citizens who had been residents for a greater or less period of time.

The *city* of St Augustine (it being a corporate municipal body,) is situated in latitude 29° 51′ N., on the eastern shore of the cape or peninsula of Florida, and on a bay formed by the junction of three short tide rivers, the Matanzas, St Sebastien's and the North. It is at the distance of about two miles within *the bar*, which stretches from the main land to Anastasia Island. This bar renders the entrance or exit of vessels drawing more than 9 or 9½ feet of water impracticable, and is said to be constantly changing its direction, leaving a very circuitous channel much influenced in its depth and direction by the tides and winds. The attempt is rarely made to enter without a pilot; and from the natural obstructions, as well as the want of capacity, indolence or absence of competition among the pilots, the harbor is justly esteemed, one of extreme difficulty. It is no unusual circumstance for vessels to be detained at the bar for weeks (a most tantalizing situation for the sea-worn invalid,) and they have occasionally returned or changed their destination, having waited in vain for the pilots.

The surf breaking on the outside of Anastasia Island in certain winds is tremendous; when heard in the city it resembles very much the roar of Niagara Falls, a circumstance not a little annoying to the sick before the ear becomes accustomed to the sound.

The city, which is surrounded by a small creek called the Mari Sanchez, swollen however into a considerable stream at high water, consists of four or five streets, from 16 to 20 feet only in width, running nearly parallel to the Matanzas, about half a mile in length and intersected every few hundred yards by others crossing at right angles. A considerable open space is left near the middle of the city which is dignified with the appellation of *Plaza de la Constitucion*, in the centre of which

to advise an invalid to seek such a situation. He also expressed to me his intention of informing the public of the errors in his first statements and opinions. Whether or not the community were ever disabused in relation to this subject in the same channels in which the accounts were first published, I have not learned.

is a monument of plastered shell rock, built in commemoration of the constitution granted to Spain by her monarch. Around this square the three or four churches, and public buildings are situated. The streets are in general built upon pretty compactly, but a great number of the habitations are in a deserted and completely dilapidated condition. The exterior of the buildings is of a most unpromising description, resembling at a general view an irregular conglomeration of roughly plastered hovels; and in fact, the entire aspect of the place is that, which is actually its case, of 'having seen better days.' There are, however, some half dozen of the residences, which are tolerably convenient and comfortable. The dwelling houses generally bear some marks of the Spanish taste, as in having the entrance through a high court-yard, balconies projecting over the street, &c. There is, however, too little uniformity in external appearance or internal construction to allow their being referred to any one model. The floors of many of them are constructed of *tabbia*, a mixture of lime and shells, which becomes in time much consolidated and smooth, but in winter is cold, damp and uncomfortable. The material of which almost all the houses are constructed, is a conglomerated shell rock, which is found abundantly on Anastasia Island, within a few miles. When first removed from the quarry, its structure is so soft as to allow of its being prepared for building by being hewn with the broad-axe, but it attains a considerable degree of solidity after long exposure to the atmosphere.

This is the only kind of *rock* found in this section of Florida. The whole surrounding country is a perfect level of sand, intermingled with broken pieces of shells, and destitute of every mineral production, even the smallest sized stone. No natural elevations, even of a few feet, are to be found.

The old Spanish fortress, now called Fort Marion, stands at the south-eastern extremity of the city. Though unoccupied and very considerably out of repair, it presents a fine specimen of the ancient style of fortification. The company of U. S. Troops stationed at this post are garrisoned at the other extremity in barracks, which were formerly the Nunnery of St Francis.

There is a catholic church, much out of repair, in which, however, owing to undecided litigation between priest and people, no services had been held for a considerable period; —a small methodist chapel not ordinarily used; a presbyterian meeting house commenced some six years ago, but not

sufficiently finished to be occupied, and a small edifice 40 by 30 feet, designed for an Episcopalian church, just commenced. These with the old Spanish government house, now fitted up for the U. S. Court, and in which public worship was usually held, principally by the provision of the Missionary Society, comprise all the public buildings.

The agricultural productions of the vicinity are almost nothing. A little market-place is furnished with one beef, uniformly of miserable quality, which is adequate to the consumption of the whole place, with fish in some variety, including a small and indifferent species of oysters, and rarely with pork and poultry. Mutton is never seen; sheep, it is said, being immediately destroyed when turned to pasture, by a small sharp-pointed bur called the *cockspur* which grows everywhere. Garden vegetables of all kinds, as well as hay, butter, apples, &c, must be brought from the north, and are generally of indifferent quality and high prices. The market is so limited and the number of vessels arriving so small, that there are frequently long periods in which some of the most necessary and essential articles cannot be obtained at all, or only at the most exorbitant rates; butter for example, at 75 cents per pound. With a soil and climate capable of producing almost every article of vegetable use or luxury. Such is the indolence and want of enterprise of the great bulk of the population, that they prefer subsisting day after day on fish, oysters and the sweet potatoe, to the trouble and labor of raising breadstuffs, garden vegetables, poultry, &c.

The only article of export, and what *with the exception of invalids* forms the only article of *traffic* of the population, is the crop of oranges; of these 120,000 are raised in an average year, worth ten dollars per thousand on the spot, and there is always a very ready demand for them. But strange as it may seem, where the land is cheap, the growth of the trees quick and easy, seven or eight years from the seed being enough to render them profitably productive, the quantity raised per annum increases very slowly, almost no new plants being set out.

The population of St Augustine by the return of the marshal at the census of 1830 was as follows:

White males	570	Slaves	474	Total, 1708.
White females	538	Free blacks	126	
Whites,	1108	Colored,	600	

— an amount very much below the statement of any gazetteer or account which I have seen. Of this population a great proportion of the whites, probably not less than 7 to 800, are *minorcans*, as they are called. They are descendants of a colony of redemptioners, brought out from the Balearic islands in 1785 by one Turnball, an Englishman, to New Smyrna, or Musquito Inlet, about sixty miles south of St Augustine. From fear of being permanently retained as slaves, and finding him unable to fulfil his contract for their support, they abandoned him in a body and came to St Augustine, where they have since lived almost unmixed with the Americans, retaining all their original ignorance, indolence and superstition. They speak a kind of *patois*, between the Spanish and Italian, and are without exception catholics with the feelings and views of a century or two gone by. From what has been said it will be readily inferred that almost all those articles which are so comfortable and almost essential in sickness, are to be had only from a great distance, or what happens continually in so small a market, not to be obtained at all. Milk, usually considered so important an article of diet in consumptive cases, was not to be procured except with much difficulty and in very small quantities; so much so, that probably no invalid there attempted to make it an exclusive, or principal article of food. In fact, the sick are constrained to do without those thousand articles of caprice or utility, which at the north are ever ready to soothe the fancy, or alleviate bodily distress.

The privileges of taking exercise at St Augustine are few and inconvenient. After leaving the immediate bounds of the city, there is nothing to interest or amuse the mind. A perpetual succession of scrubby woods and barren sands, without one pleasant landscape or agreeable view, presents few inducements to prompt the invalid to embrace that valuable auxiliary in chronic disease, exercise in the open air. The means of gestation are few and very expensive. Horses are almost unknown, their place being very imperfectly filled by a breed of Indian ponies about the size of the common jackass. Carriages of every description are hardly to be obtained, nor any kind of boat, the rowing and sailing which is often an agreeable and salutary mode of exercise, except the miserable, inconvenient, unsafe *dugout* or log canoe.

In short (excepting the climate, whose claims to attention we shall shortly examine) St Augustine possesses in a most eminent degree the deficiency of everything which can amuse,

improve or restore the invalid, and the presence of every thing which can serve to irritate his feelings, impoverish his estate, and disappoint his hopes.

I have gone considerably into these statistical particulars respecting this place, being induced by the fact that all our gazetteers give very erroneous accounts of it, several of them stating its population to be from 4 to 5000, one placing it at the foot of a *considerable hill*, &c; and still more from the circumstance that the circulars addressed to invalids, for obvious reasons, attempt to keep up the impression that it is a large, flourishing city.

The statements respecting the climate of this part of Florida, which have been repeated in all the various accounts, have had as a pretended basis actual thermometrical data. But it may be, that even these which at first sight appear incapable of misleading, agreeable to the old axiom that 'figures cannot lie,' are in fact easily distorted, so as to convey very erroneous impressions as to the value and expediency of the situation for the valetudinarian. The error which has most prominently affected these statements, has arisen from the unfair, injudicious exposure of the instrument from which the observations were made. The published memoranda have been those abstracted from the journal kept by a military regulation of the government at the barracks. The thermometer, apparently an ordinary, cheap, American instrument, is suspended in the second story of an immense stone building, at the side of a door which forms a communication between two large rooms, each of which has two open windows on the S. E. and N. W. sides. The whole story is surrounded by a roofed piazza 20 or 25 feet in width, so that in fact, the thermometer is not within some 40 or 50 feet of the open air. A moment's reflection will convince any one at all acquainted with thermometrical observations, of the absolute inutility of such an arrangement to give any thing more than an approximation to the actual temperature.

The other instrument from which, I believe, some of the published data were derived, is suspended, if possible in a still more objectionable and absurd situation; that is, under a piazza of stone, the whole interior of which is whitewashed, so that a constant reflection was thrown upon it when the sun shone. Both of these instruments in every instance, in which I compared them, indicated a considerable difference between

each other, as well as varying from the one from which I kept the register below.

The hour of the day (2 o'clock) at which the middle observation was taken, is far from expressing the highest range of heat, and it was solely on the ground of convenience that its selection was defended. In a series of observations made for the purpose, I invariably found a fall of the thermometer after about one o'clock. This error has given the climate an appearance of considerably greater uniformity than it actually possesses, and it has been on this point, its boasted evenness, that visitors have been most deceived. The Rev. Dr Porter, of Andover, whose letter on the climate, &c, of St Augustine, was circulated by those interested, far and wide, was induced to believe, (though I am unable to divine on what grounds, or from whom he could have derived his information) that a change of 12° in the 24 hours was very unusual, and that changes greater than this were almost unknown. So far from such being the case, the examination of my table of memoranda for Jan. and Feb. 1831, will demonstrate the fact that there was hardly a day in which as great change was not noticed, as well as repeated days when the variation was from 20° to 30° in the 12 hours of day-time; and had the observation at meridian and at the coldest part of the night been recorded, the inconstancy of the temperature would have been still more palpably striking. Some sudden changes will be noticed in the table which could not be surpassed in the mutable climate of New York.

It has also been frequently observed by visitors how remarkably sudden and uncomfortable a change of temperature is produced by the passage of a cloud before the sun's disk. It was no uncommon circumstance for a fall of 7° to 10° to be produced in about as many minutes.

The pretended mildness of the nights has been a point on which much stress has been laid, constituting, as one circular remarks 'the secret of the climate. In other climates, the night is almost invariably, and is always liable to be, colder and damper than the day. In St Augustine the reverse is the case, and thus the delicate lungs of a patient are secure from one of the greatest sources of irritation.' I can state that during the whole of my residence there, this was by no means the fact, nor do I believe, from the inquiries I made, that it ever is, during the winter season. From the nature of my duties I had opportunity to notice the weather during almost every night,

and can therefore speak with positiveness on this subject. During a portion of the summer months, it may be the case that the nights are not cooler than the days, and I am inclined to believe that the cooling effect of the daily trade winds, during what would otherwise be the intolerably hot season, has not been much exaggerated. This advantage however, is of very little moment to pulmonary invalids, very few of whom could be induced by any consideration to think of spending the year there, when the season of summer and early autumn offers no objection to a residence in the northern or middle states.

No barometrical or hygrometrical observations have ever been registered at this place. I am persuaded that when they shall be, the boasted dryness of the atmosphere will be found to rest on no better evidence than its freedom from atmospherical vicissitudes.

I did not commence keeping a register with regularity till some time after my arrival; not indeed, till I was convinced how erroneously and unfairly the former observations had been made. During this period, I would remark that a cold N. E. storm prevailed for about a week, followed by a warm, foggy atmosphere, in which the thermometer was as high as 74° several times and a few days subsequently as low as 36° — white frost was also noticed.

Register of the Thermometer.

	Date.	at 7.	at 2.	at 7.	Winds and Remarks.
Jan.	16	38	46	48	Cold west wind.
	17	26	40	32	N. W.
	18	21	45	38	At 3 o'clock A. M. 25° — at 6 A. M. 22°.
	19	34	53	42	At 6 A. M. 28° — at 10 A. M. in the sun 93°!
	20	33	62	48	White Frost.
	21	42	64	59	Cloudy. Wind S. W.
	22	56	52	50	Rain in the night.
	23	32	57	46	E. — Cloudy.
	24	43	68	52	N. W. do. [the shade 56°!
	25	42	64	49	At 10½ A. M. in the sun 102°, same time in
	26	36	68	54	S. E.
	27	44	76	57	Flying clouds.
	28	47	74	61	S. — Cloudy after M.
	29	63	73	67	Tremendous gale last night — showers A. M.
	30	54	63	56	Cold easterly storm.
	31	65	73	54	S. thick, with showers.
Feb.	1	48	69	58	Heavy fog A. M.
	2	50	76	59	E. [clouds. P. M. wind W.
	3	65	80	74	Violent E. wind through the night — thick
	4	43	50	41	Rain last night. In sun, at 1 P. M. therm. 90°.
	5	38	45	44	At 3 P. M. commenced *snow* and hail. Wind
	6	54	55	54	Thick cloudy. [N. therm. at 43°, cont'd 10 m.
	7	40	46	45	Do do
	8	42	56	46	Do with rain.
	9	43	58	48	Do.
	10	39	51	44	
	11	41	69	48	[of the sun, obscurely seen.
	12	46	51	43	Thick flying clouds. Wind E. Great eclipse
	13	53	64	50	Wind N. E.; flying clouds.
	14	52	76	58	S. — cloudy, hazy.
	15	60	67	60	E. — cloudy, rain.
	16	63	72	63	E. — do do. with heavy thunder.
	17	53	69	49	W. — clear at morning; P.M. cloudy and rain.
	18	48	63	48	N.
	19	54	62	56	N. — cloudy in part.
	20	53	70	54	N. E. flying clouds.
	21	61	77	60	Cloudy P. M.
	22	62	76	68	Cloudy, with a remarkably dense fog.
	23	56	70	59	N. In the sun at 1 P. M. therm. at 94°.
	24	46	71	55	N. W.
	25	54	70	58	N. W.
	26	53	71	58	N. W. and round to E.
	27	54	75	62	S. E.
	28	60	72	59	Heavy rains A. M., clear at 1 P. M.
March,	1	58	64	54	E. — cloudy.
	2	56	70	62	S. W.
	3	57			N. E.

The instrument was suspended at a northerly exposure, and in shade throughout the day.

The following is an abstract of the diary kept at the military post, during the colder months, for five years. It is published from Dr Porter's letter to Dr Warren, and is subject to all the errors I have before pointed out.

MONTHS.	Highest.	Lowest.	Mean Temperature. 7 A. M.	2 P. M.	9 P. M.	winds.
1825.						
November,	76	53	62	69	65	NE.
December,	76	42	60	75	52	NE.
1826.						
January,	68	44	52	55	54	NE.
February,	77	52	60	79	65	NE.
March,	80	62	66	71	70	SE.
November,	80	52	60	64	70	NW.
Dec. 1827. Jan. Feb. March,	omitted.					
November,	76	48	58	68	63	NW.
December,	76	44	66	67	62	SE.
1828.						
January,	83	46	63	70	66	SE.
February,	84	52	67	70	61	SE.
March,	82	50	52	63	61	SE.
November,	81	53	60	69	64	SE.
December,	78	61	60	70	64	SE.
1829.						
January,	68	28	53	65	56	NW.
February,	77	30	53	60	52	NE.
March,	76	36	53	64	56	NW.
Nov. Dec.	omitted.					
1830.						
January,	68	46	56	61	59	NE.
February,	76	56	67	63	58	NE.
March,	80	50	62	68	65	SW.

The plan of averaging the temperature for the month or longer period, is obviously unfair and jesuitical; more especially as far as the invalid is concerned. To him the extent of atmospheric changes and their suddenness are the important objects. In fact, it is believed that a thermometrical register of Montreal, or any of our extreme northern cities, would, from the intense heat of the summer months, be far from exhibiting, on an annual average, an ungenial climate.

Were the question asked me, if I saw or heard of any well authenticated instance of consumptive disease cured, relieved or protracted by any 'curative effect,' of this climate, truth would compel me to say I saw or heard of none, nor have I a doubt that many individuals, who were seduced there by misrepresentations, did not actually live as long as they would have done at the north;—the fatigues, exposure, want of medication, nursing, proper diet, &c, during an inclement winter passage on a dangerous and harborless coast, added to the severe disappointment of finding none of their expectations fulfilled as to the place itself, undoubtedly accelerated the inevitable fate of the consumptive.

To the individual laboring under well marked consumption, using the term in its widest sense as characterising the various forms of chronic pulmonary disease, the best advice I could offer as to change of climate would be the oriental benediction, 'May you die at home!' To those in the incipient stage, or strongly threatened, I would urge my conviction that a well regulated artificial temperature, and judicious medical and dietetic treatment (and I may here, I hope without invidiousness, express my belief that pulmonary diseases are no where so well treated as in New England,) offer far greater hopes of relief than sea-voyaging or change of climate.

The use of the *stethoscope*, for a want of an acquaintance with which, no apology can now be offered by the practitioner, certainly has thrown so much light upon, at least, the hopeless forms of consumptive disease, that no patient need be sent off in ignorance of his incurable state, to endure the miseries, privations and disappointments of another climate.

I am respectfully, Gentlemen, yours,

L. V. Bell, M. D.

Art. IV.—Spurzheim's Physiognomy.

Bacon classed physiognomy among the sciences, as one branch of natural history, and most of us are employing it intuitively every day in determining character. Lavater and most others have sought for the physiognomical signs chiefly in the soft parts, in the development and movements of the muscles; but

Spurzheim finds them in the size and configuration of the hard parts. 'These,' he says, 'proclaim innate dispositions and capacities of action; those indicate powers in action, and constitute what is called *pathognomy* or natural language.' In the volume before us, his object is to show, as the result of observation, that the prevailing propensities and dispositions of men are most truly indicated by their peculiar cerebral developments, as manifested in the form of their heads. He presents us with accurate delineations of the heads of some seventy remarkable men, among the ancients and moderns, each accompanied with a brief analysis of his character from authentic history, and the reader is invited to observe and determine for himself, whether in each case, that portion of the head is not remarkable, in which the phrenologists locate those organs, whose predominance, in development and activity, would necessarily form the character which the individual actually manifested.

In this application of phrenology, individual organs are not particularly noticed; but only the regions in which clusters of organs usually combined in particular characters, are situated.

Thus it is especially interesting to those who receive the general principles or outlines of phrenology, as they are called, but have not got enough of observation or faith, as the case may be, to admit the details, or the determination of individual organs.

The biography of the departed philosopher, which is prefixed to this essay, is a very unpretending, but respectable and appropriate composition. The author does not, as is too often the case, attempt to show off himself, instead of his subject, in an elaborate analysis of his character, or criticism of his works, but has industriously gathered together the most interesting particulars in the life and labors of the lamented phrenologist, and presented them to his readers, in such form and succession as to furnish a very complete and entertaining biographical sketch.

The typography and general execution of this volume deserve unqualified praise. The paper is good, the pages are allowed a generous margin, and the plates are quite as good, and in some cases better, than those in the English edition.

COLLECTANEA.

Treatment of Ranula.

Even with this degree of knowledge of the cause and nature of the tumor, its cure would at first appear little difficult. Nevertheless the history of surgery shows that in reality the cure is, but rarely and with difficulty obtained. The puncture of the tumor in the mouth is the plan most generally practised, and a straight-bladed bistoury, a lancet, or a trocar, is the instrument employed in the operation. If the humor be limpid, little viscous or consistent, and if no concretions exist, this kind of paracentesis will procure its evacuation, and give the patient some transitory relief; for the opening soon closes, the saliva re-accumulates, and the tumor re-appears. J. L. Petit reports a case in which puncture with the trocar was repeated ten times without curing the disease. The incision, or puncture, may be made on the apex of the tumor which projects in the mouth, or at the anterior and superior part of the neck. This last situation has been considered an error of choice, and many practitioners believe that the external opening may give rise to an obstinate fistula. A case borrowed from Muys has been cited by almost every writer in proof of this notion. However, the fact communicated by Leclerc, a surgeon at St Vinox, to the Royal Academy of Surgery, would seem to prove that these apprehensions are not well founded. Leclerc made the puncture under the chin, and enlarged the opening with the bistoury. A great quantity of fluid and sandy matter issued, and methodical dressings soon effected a cure. But this result itself seems to show, that Leclerc had to deal with a mere serous cyst; for had it been a true ranula, the puncture would only have procured a temporary cure. The disease would have re-appeared had its seat been in the excretory duct of a salivary gland.

In fact, the result we should endeavor to obtain is, not merely the evacuation of the tumor, but the prevention of a new accumulation of fluid, and for this we must keep the orifice open. This desirable object is more frequently obtained by the *actual cautery* than any other manner. Still, this, too, is far from being infallible, as Sabatier and many other celebrated surgeons have found, and as our own experience demonstrates. It is indeed astonishing, that an opening practised on a sac distended with a fluid flowing incessantly, should be insufficient, and that the continual discharge of this liquid should not prevent the closure

of the opening. But the fact is certain, and seems to prove, that in the formation of these fistulæ, there is something more than the discharge of a liquid, since the simple wound, or one even with loss of substance, cannot produce a fistula of Wharton's duct, by which the ranula would be acrid; or else the return of the tumor, after an opening has been made, indicates the existence of a serous cyst rather than that of a ranula formed by the dilatation of the excretory ducts of a salivary gland.

Sabatier, and before him the celebrated Louis, have obtained the cure of some tumors of the same kind as those we are speaking of, by placing in the opening made by cutting out a portion of the walls of the sac, pledgets, or tents of charpie, pieces of bougie, lead, wire, &c., which were drawn out daily, in order to permit the discharge of the liquid accumulated in the pouch. But all that has just been said relative to the *puncture*, and subsequent introduction of foreign substances into the wound, shows that these means can only be considered palliative, and that they are, consequently, insufficient. The same remark applies to *incision*, for the extent and direction of the opening avail nothing, a large and small wound cicatrising with equal rapidity. The *excision* of part of the parietes of the sac has been proposed and performed, but this has, in many cases, only postponed the relapse, without effectually preventing its recurrence. Cicatrization occurs more slowly than, but just as certainly as, in the simple incision. In this excision, the lesion of important nerves or vessels is not to be dreaded, and astringents almost always suffice to arrest the trifling effusion of blood which ensues.

But with *extirpation* it is altogether different. This has been dreamed of, but its performance has not been attempted. The dread of injuring the essential blood vessels and nerves has prevented the attempt. But what end could such an operation propose? If the tumor were only removed, a difficult and delicate operation would be performed, without the certainty of preventing the return of the disease. It would be necessary then to include the glands themselves. We do not think that such an operation ought to be attempted.

Could the *injection* of an irritating liquid into the evacuated sac induce a cure by the inflammation and adhesion of the walls? But then the functions of the gland would be rendered useless; the liquid it would continue to secrete, finding no issue, would gradually distend the ramifications of the excretory duct lodged in the interstices of the lobules composing its substance, and might determine a swelling, followed by intense pain, inflammation, suppuration, and external fistulæ; lastly, the inflammation produced bythe irritating injection might extend to the tongue and the larynx, and other adjacent parts. To resume: if the disease have really its seat in the external ducts of the salivary glands,

the treatment by injection is not rational, and cannot be proposed. If, on the contrary, the ranula is nothing but an encysted tumor, containing a serous or albuminous liquid, the injection may have advantageous results. The catheterism of the excretory ducts of the submaxillary glands is difficult. As the ranula depends less on the contraction of these channels than on their obliteration by foreign substances impacted in the tumor, or on the effect of inflammation, the employment of sounds or bougies appears to us to be altogether useless.

The practice of cauterization dates from the earliest times of dogmatic medicine. In speaking of *hypoglossitis*, Hippocrates recommends us to place on the tumor a sponge soaked in a hot emollient liquid; when pus existed, he made an incision; sometimes he waited, however, till there was a spontaneous opening, and then he cauterized with fire. Celsus was content to open the tumor if small. When large, he introduced the instrument more deeply, then seizing the lips of the wound at each side, he isolated the cyst from all the surrounding parts, and removed it altogether, taking care to injure no vessel. Fabricius ab Aquapendente, who almost always took Celsus for his guide, nevertheless only borrowed the incision from him here. Marc Aurelius Severus and Tulpius recommended the use of the actual cautery, but the latter only where the tumor was hard, and its walls very thick. When the contents are liquid, as is recognised by the touch, he is satisfied with a slight excision. Ambrose Paré gives the same advice, and says we should open the tumor with a red-hot iron.

Acids have been suggested as preferable to the actual cautery, to incision and extirpation, but their adoption is discountenanced by the dread of being unable to limit their action, and lest the disorganization should extend too far, and even involve the duct of Wharton itself. Camper says he succeeded in opening largely the tumor, and then touching it with lapis infernalis, but he confesses that he has often been obliged to repeat the application of the caustic.

New Mode of Treatment.

It results, then, from the preceding exposition that all the modes of practice of which we have given an account, are more or less defective, and I now proceed to make known a simple and certain method which I have already employed repeatedly with success.

The mode of practice is analogous with that so successfully adopted in lachrymal fistula. A small instrument was made for this purpose, formed of a hollow cylinder through which the saliva was to flow, about four lines long and two broad, terminated

at each of its extremities by a small oval plate, concave on the free surface, convex on the surface connected with the cylinder. One of these little plates should be within, and the other without the sac, that is to say, in the cavity of the mouth. It may be made of silver, gold, or platinum, especially the last, which is less readily attacked by the animal fluids than the other metals. The case first healed in this manner was that of a young soldier. An opening was made with a pair of curved scissors, the instrument introduced, and the patient was cured in fifteen days.

Subsequently to this case it was found that the instrument now described was susceptible of some improvements. The terminating plates were accordingly adapted to the cylinder by the concave, not the convex, surfaces. The cylinder was made eliptic instead of round, and solid instead of hollow, it being found that the saliva escaped as well between its sides and the wound as through the channel, and it was, moreover, liable to be choked up by portions of food. Lastly, its size was diminished to three lines in length, and one and a half diameter, varying as to length, according to the thickness of the walls of the cyst.

[To the preceding report the French note-takers have added the details of four other cases extracted from other sources, and so similar to the above, that it is altogether useless to give them insertion here.]

But we must not forget, in the treatment of this as of other maladies, that the cause must not be overlooked. As inflammation of the excretory ducts of the sublingual and maxillary glands may also determine ranula, and as the phenomena of this inflammation are too evident to be mistaken, it is this inflammation which must be attacked by previous scarifications, leeches, &c. In this case the evacuation of the liquid is a secondary object, for when the cause of the accumulation is removed, the effects will of themselves disappear.

It sometimes, again, becomes necessary to distinguish the ranula from lepomatous or fatty tumors. The origin, form, and consistence of both, often are very similar. In a case of this kind at the Hôtel Dieu, an exploring puncture removed all doubt, by showing the fatty flakes which projected between the lips of the wound. A character of the fatty tumor, however which is not met with in the ranula, is the kind of strangulation, the former at its middle part, and at the point where it passes from the mouth to the upper part of the neck. But here, as in many other cases, the exploring puncture will remove all doubt, and at the same time assist in the treatment of the case. — *Dupuytren's Lectures.*

Caution to Schoolmasters.

A *post-mortem* examination took place a few days since in the case of a lad (James Goddard) who was admitted a short time previously under the care of Mr Brodie, at which time he complained of a pain over the region of the loins and pubes. Mr Brodie examined his bladder with a sound, but could detect no stone, only a slight irregularity about the *crevix vesicæ*. He was blistered over the loins, with some benefit, and was able in consequence, to retain his water better than before, and took calomel and saline purgatives. The nurse had just dressed his blister in the evening, when he was suddenly seized with a fit. Stertorous breathing and dilated pupils occurred, and he died. After death the vessels of the brain were found greatly injected, the kidneys were of a large size, lobulated, and filled with thick, flaky, coagulable lymph, some of it clear and transparent, and Mr Brodie remarked that he had seen this clear lymph passed sometimes with the urine. The ureters were found also obstructed, and their coats thickened, and the mucous membrane of the bladder was highly inflamed. Mr Brodie ordered the bladder and kidneys to be put up for anatomical preparation in the museum, and a drawing to be taken of them by Mr Perry. We believe the boy dated all his sufferings to his being confined at school for six hours, without being allowed to go out to make water. — *Lancet.*

Glanders in the Human Subject.

[Case in St Thomas Hospital, reported by Mr Youatt, Veterinary Surgeon.]

"A man, aged twentythree, was admitted into St Thomas's Hospital with no other complaint than general indisposition and debility. A few days afterwards profuse diarrhœa supervened; and when this was, with some difficulty, arrested, he began to complain of much pain in the head, and became delirious, to mitigate which leeches were applied to the forehead; he then spoke of wandering and acute pains everywhere, indicating some rheumatic affection; and a tumor appeared on one of the metacarpals, and another on one of the metatarsals, seemingly of a gangrenous nature. The pain in the head would again return, attended by delirium, so that he was compelled to be strapped on his bed, and, all the while, his flesh was wasting and his strength diminishing, and, in fact, he was evidently sinking.

"Five days, however, before his death, the sight of the leech-bites assumed a purple, puffy appearance — the approach of sloughing was indicated; and similar soft tumors appeared on

the back part of his head, and rapidly increased until the posterior part of the head assumed a strangely swollen and unnatural appearance; at the same time some scattered large globular pustules began to arise on the neck, and there was occasional discharge from the right nostril, which was thin, yet somewhat adhesive, of a yellowish brown color, and exceedingly offensive. A smaller discharge, but not so frequent, appeared also from the left nostril. The man now began to rally a little, and could be induced to enter into a somewhat unconnected conversation.

" The tumors increased in number and size, but were still promiscuously scattered, and many of them were seen on the arms ; on some parts of the arms and on more parts of the legs there were, in the course of the principal lymphatics, slight elevations of the integument, which, on pressure, seemed to indicate the presence of a fluid, and some of which began to assume a red and even purple hue.

" The resemblance between these new appearances, and two cases of supposed inoculation with the matter of glanders which had occurred in this hospital in 1829, under Dr Elliotson and Mr Roots, struck Mr Stone, the assistant apothecary of the hospital, and the former gentleman happening to be in the hospital, and the physician by whom the patient had been admitted not having to attend again until two days had passed, Mr Stone requested him to see the man. Dr Elliotson immediately confirmed Dr Stone's diagnosis: and, on questioning the poor fellow, it was ascertained that he had had a glandered horse under his care a month before, and that the discharge from the nose had often come upon his hands. The case was now sufficiently plain, but the patient was too far gone to admit of the slightest hope of cure, and the attention of the medical attendants was confined to the mitigation of the severest symptoms, and particularly an insatiable thirst with which the sufferer was tormented. Dr Elliotson had the kindness to inform us of the case, thinking that the inspection of it would be interesting to veterinary practitioners.

" On Saturday, the 16th, we saw him : the appearances were as above described, except that the puffy tumours were assuming a more gangrenous character ; the pustules were more numerous on the face and neck, but not running in any decided direction, and one of them on the neck was as large as a horse-bean. The discharge from the right nostril was more profuse ; there was occasional discharge from the left one, and from both it was insufferably fœtid. His eyes were closed, with considerable œdema of the lids. On the arms and legs were numerous smaller pustules, which dried up and scaled off ; but there were on both a few elevated spots, evidently in a line, and fol-

lowing the course of the lymphatic ; some possessing no discoloration, others of a dark leaden hue, and of various degrees of hardness, and some then giving the perfect indications of a fluid somewhat deeply seated. On one of the ancles, and on the back of the left hand, were more decided puffy swellings, acquiring rapidly a purple tinge. The general emaciation and debility were extreme. The thirst was dreadful. The poor fellow was continually crying out 'Water! water!' and when the sister fed him with toast and water from a spoon, he would cry impatienly, 'That's no use! give me half a pint of water — bring a pail of water — throw a pail of water over me.'

"We obtained permission to open one of the pustules for the purpose of inoculating an ass with the matter, and another was opened for the use of the medical officers of the hospital : then drawing the poor fellow into interrupted and not always intelligible conversation on his own subject, he again confessed that there had been a glandered horse in the stables in which he was a helper, and that had been long kept by itself — that he was accustomed to groom it — that it might be six or seven weeks ago when he first began to attend to it — and that for a fortnight or three weeks, or more, before he was admitted into the hospital, he had not been able to attend as usual to his work, and did not know what was the matter with him.

"A wound which had been upon the back of his right hand at that time was perfectly healed : there was no redness or inflammation about it, nor could any corded absorbent be traced from it.

"About two o'clock on the following morning he died ; but sometime before that he rallied, and gave an interesting illustration of the ruling passion strong in death : 'I am dying,' said he ; 'I shall die soon, but I shall die happy — I know now I am glandered — I shall die as my horses do — I shall die quite happy.'

"*A post-mortem examination* took place on the noon of the following day, at which we were also permitted to be present. The pustules or bullæ about the face and neck had all subsided. The puffy tumors on the forehead and back part of the head were gorged with a yellowish semi-transparent glairy fluid, giving to the whole a kind of gelatinous appearance when cut into, yet with scattered minute abscesses. There was neither offensive smell, nor decided gangrene. The pericranium was sound, and on dissecting it, it was thought by some that there were minute granulated tuberculous substances on it, but they appeared to us to be only portions of this gelatinous substance left in the dissection.

"On raising the scull-cap, the frontal sinuses were exposed,

and in one of them was a very small congeries or bunch of tubercles, or rather vesicles, hanging loosely in the cavity.

" There was no ulceration, or inflammation, or collection of pus, or any other fluid, in the sinuses connected with the nasal cavity ; but on the right side of the septum there was considerable injection, and two minute ulcers, with the preparatory vesicle of a third, and in a line, and following the course of the principal vein in the septum. The edges were decidedly elevated, and seemingly everted, and bore, on a small scale, no indistinct resemblance to the glandered chancre of the horse.

" The most important lesion, however, was found at the base of the larynx, where was a veritable glanderous chancre, with perfect, elevated, abrupt, and everted edges; but its central depression was not so great as is usually seen in the horse. Near this was also a preparatory vesicle.

" The lining membrane of the trachea was slightly inflamed, the bronchi more so, and puriform fluid might be squeezed out of many of the bronchial ramifications ; but there was neither vomica nor tubercle. The other viscera were comparatively healthy, except that in the lower portion of the colon there were many enlarged glands, and even the membrane seemed abraded, an appearance which accounted for the diarrhœa.

" On the whole, the examination was satisfactory. The characteristics of glanders were sufficiently developed, but modified by the difference of the subject." — *Lancet.*

Six Children at one Birth.

On the 30th December, 1831, the wife of a man named Dernian Ploson, living in the village of Dropin, in Bessarabia, was delivered of six daughters, (the fruit of one pregnancy,) all living, and only a little smaller than the usual size of children at birth, with the exception of the last, which was much the least. The mother is not quite twenty years of age, and of a strong constitution. The whole six children lived long enough to be baptised, but died in the evening of the day of their birth. The mother suffered from severe indisposition subsequent to her confinement, but is now quite well. — *Gaz. Medicale.*

Effects of Tic Douloureux on the Mammæ and Testes. By S. Hood, of Brighton.

The first few cases of diseased testicle accompanying neuralgia of the sciatic nerves, I believed to be only an accidental cir-

cumstance; an opinion, which, I apprehend, is pretty generally entertained respecting cases of this description. In five out of eight consecutive cases of diseased testicle, with neuralgia of the sciatic nerves, this gland has become small and soft; while in the remaining three it was hard and enlarged. In cases of this kind the patient seldom complains of pain in the testicle, and is indeed, generally quite unconscious of its being diseased. Recently a gentleman consulted me for tic douloureux of the left cheek and side of the head, which had recurred at intervals for seven years. After having detailed his sufferings, on being asked if there were any disease of the testicles, he congratulated himself, with much apparent satisfaction, on being "all sound there." Finding his assertion doubted, he submitted to an examination, when he discovered, to his mortification, the left testicle quite soft, and only about half its natural bulk. In every other respect this was a robust, healthy man, therefore the softening of the testicle could not be referred to constitutional debility; besides, in the course of a month, great mitigation of pain being procured, the testicle resumed its glandular structure, and very nearly its natural size. When the neuralgic attack is violent, it is probable that the testicle becomes sometimes affected at a very early period of the disease, for in one of the above mentioned cases it was found lessened and soft on the tenth day of the disease. It is necessary, however, to add, that in this instance the sciatica was combined with the ilio-scrotal neuralgia of Chaussier; but the sub-carbonate of iron restored the testicle to its natural size and hardness in four days.

I have had no opportunity of ascertaining whether sciatic neuralgia causes any alteration of the mammæ in women; but the following inveterate case of tic douloureux, abridged from the patient's own statement, leads to a suspicion that they sometimes sympathise with neuralgia of the face.

"I have head-aches of every description — sick, rheumatic, nervous, or what I call eye-aches, which are my eternal torment. Though the pain seems seated in the right eye, yet pressure on it sends a soreness and pain darting into my head, and extending all over this side of my head, face, teeth, gums, tongue, throat, roof of my mouth, so that life is really a burden. The veins of my brow swell like cords, and my eyes are red and inflamed, my stomach feels always sick, the retching is very violent, and often, though not always, do I bring off the contents of my stomach. These attacks last from three to six days, and nothing that I know can save me from an attack, or alleviate or shorten its duration. Before, after, and during the attack, the top of my head is as sore as it is possible to be, and there, as also wherever the pain had been, I feel an itching. The nostril is dry and stuffed and the skin peels regularly off my lips. The

symptoms of an approaching attack are generally the itchy soreness on the top of my head, itching and creeping about my face, coldness of my nose, and a teazing tickling in my throat; yet sometimes I have all these symptoms and escape, and at others I am attacked without any notice whatever. The causes of an attack are equally uncertain, that is, to my observation; I generally attribute it to cold, of which I am miserably susceptible; not that I feel cold readily, that I do not, but I think that I catch cold for a very trifle. I cannot go out of doors, I cannot bear a breath of air; it seems to me to be air, not cold, that hurts me. I cannot walk up and down the room, or allow any one to pass and repass me, for the agitation of the air seems to *strike* my eye and temple; and this I feel, be the weather warm or cold; more frequently, I think in the former, for the weather must be cold indeed, if I am not in some degree of perspiration. A cold in my head I never have; my feet, legs and knees are the only places where I feel cold, and they are dreadfully so; let me do what I may, they are like ice; fire heat will scorch, but not warm them.

"Till lately I fancied myself free from any fatal disease, but now I fear I have something the matter with my heart; I feel an uneasiness all about it, nor can I lie for any time on the left side; the pulsation is very irregular; at times it beats strong and quick, at other times it seems to stop altogether, which takes away my breath, and is followed by what I can hardly describe, a quick gurgling noise at my heart, just as if a narrow necked bottle of water were upset, when I feel suffocating, and have been so bad as to lay hold on the first thing within my reach to support myself; but I am not very well able to describe what I feel about my heart.

"My health and even mind is in a wretched state; at times I feel so miserable, such a load, such an oppression on my mind, and compression on my head, such an inability to move, read, write, think, or, in fact, to do any thing, that I really fear I shall go distracted. My memory is gone; every thing, the most trivial, is a dreadful labor, a task, a something which I am afraid to undertake. The state of my mind is indeed as deplorable as my health, but to express the intensity of pain, which I generally endure, is quite impossible. I do not think I was ever so thin in my life, I am quite wasted away, and if I were to date the time when my health got so very bad, it would be in 1827, but if my memory serves me right, my ailment began as far back as 1817, and I think I caught it in a current of air, while sitting between wet mats of scented grass."

Several important symptoms are omitted in the above statement of this case, but it is sufficient for the object in view to men-

tion only one of them. The left mammæ was so nearly obliterated, that it was with difficulty a trace of it could be distinguished. Though this case has not been cured, yet one interval of a month, and another of six weeks, having occurred between the attacks, the left breast not only grew perceptibly, but became rather the largest of the two. This lady's washerwoman was also afflicted with tic douloureux, confined to the second branch of the fifth pair of nerves on the left side; her right breast is wasted, and lactation quite stopped.

In the case of a third female, whose left breast was wasted, and the milk very scanty in it, there was a violent neuralgic affection of the right brow. Another woman, who had no milk in her left breast, had been subject, for several years, to a violent pain on the top of her head; but in this case, the function and natural size of the breast had not been restored with the removal of the pain. Although it appears a far-fetched conclusion to attribute these alterations of glandular structure and function to neuralgia of a remote nerve, or branch of a nerve; yet it is not very probable, that so many cases of this kind should occur, fortuitously in succession. If these alterations occurred only after long suffering, and when constitutional debility is apparent, they might be referred to this cause; but they happen sometimes before any constitutional effect is produced. Again, the sudden reconstruction of these glands, which often follows the removal or alleviation of neuralgia, would indicate that they are in some way implicated in the previous morbid action. On the other hand, it is certain that even the cure of neuralgic affections does not invariably restore the natural structure of either the mammæ or testes.—*Lond. Med. and Surg. Jour. Nov.* 17, 1832.

Cold Dash in Convulsions of Infants.

The application of a small stream of ice-cold water to the head is recommended by Richter in his *Specielle Therapie,* as very successful both in the convulsions and coma of hydrocephalus. This practice is also pursued by Dr Heim, of Berlin, and repeated so long as the fits of insensibility continue. The neck and shoulders ought to be covered with oiled silk, and the body kept warm. Dr Graves, of Dublin, recommends a similar practice. — *Dub. Jour.*

Preservation and Reproduction of Leeches. Important Discovery.

M. Moreau, of Angers, has communicated to the medical journals the important discovery, made by M. Battu, lieutenant

in the revenue police, at St Seurin, of a new and effectual method of preserving these valuable animals. It consists in placing them in a box, about three feet square, half filled with layers of rich homogeneous French soil. At the bottom of this box is inserted a small plate of tin, pierced with minute holes, and the top is closed with linen in order to prevent the escape of the leeches. The earth is moistened with water every eight days. By this process he has preserved the same leeches several months, and has even seen them reproduce. In a second letter on this subject, M. Moreau states the results of some of his own experiments on the matter. Twelve leeches were placed in one of these boxes several months since, all in a state of emaciation and debility from protracted abstinence. On examining the box a few days since, nine of the leeches were found in full health, increased in size, and there was also found a great number of ova, and minute full-formed leeches produced in the box itself. The earth proper to be employed is of a reddish-brown color, and possesses a strong power of imbibition. It must not lie dry, pulverulent, or be mixed with the roots of grass, small stones, bits of wood, &c. The temperature of the place, too, M. Moreau deemed of importance to be taken into consideration. In the successful experiment now detailed, the temperature was maintained at about 50° Fahrenheit.

The druggists who trade with our East and West Indian possessions would do well to submit these important facts to immediate experimental investigation — *Lancet.*

Leucorrhœa.

Dr Kopp, in a late number of *Hecker's Annalen*, recommends the following mode of treatment of leucorrhœa, which he says he has frequently employed with advantage. A piece of sponge, of proper size to fill completely the vagina, is to be dipped into the following solution and introduced into that canal at night before going to bed. ℞. Decoc. Ratanhiæ, ℥ xij.; Ext. Ratanhiæ, ℥ ss.; Tinct. Catechu. ʒ iss.; Tinct. Kino, ʒ iss. M.

Dr Cless, in the *Archiv. fur Medizin Erfahrung*, states that he cures almost all the cases of leucorrhœa that occur in this hospital at Stutgard with cubebs. — *Gaz. Med.*

Sulphur as a Preservative against Measles.

Dr Tourtual, a Dutch physician, states that, at a period when measles were epidemic, all the children who were under treat-

ment with sulphur for itch escaped the disease; and that those who are taking sulphur for the cure of hooping cough enjoyed the same immunity. Finally, he says that many children who were given a mixture of sulphur and camphor, and to whom these medicaments were applied by frictions were not attacked with measles, whilst those who were not subjected to that medication were affected. — *Kleinert's Repertorium*, and *Gaz. Médicale.*

Lithotomy in Egypt.

Cases of stone in the bladder are common in Lower Egypt and the Delta, according to Clot Bey's experience; but in Upper Egypt such cases are comparatively rare. There was not a body in the dead-house, and he therefore gave a descriptive account to Mr Brodie and Mr Babington, of his method of performing the operation. His first incision he makes in the line of the raphe of the perineum, beginning about six lines below the scrotum, and ending fourteen lines above the circle of the anus. He cuts in this direction, because the parts to be operated on are all here at a pretty nearly equal distance from the surface; the catheter is held by an assistant, and not by the operating surgeon; the bulb of the urethra and the vas deferens are divided, but the sphincter of the bladder is not touched. He uses an instrument which, from its description would seem to resemble Blizard's lithotomy knife. He cuts into the bladder, as he withdraws the knife by depressing the handle of the sound and the blade of the scalpel, and cutting from below and behind upwards and forwards, to avoid wounding the rectum. This description was accompanied by a diagram, which, however, it is not here necessary to give. Clot Bey says he has operated thus on upwards of sixty cases with success.

External Application of Croton Oil.

There was a case which I wish to mention to you for the purpose of conveying some information not generally known relative to the application of croton oil externally. You know that tartar emetic has become a useful external application. That it frequently removes deep-seated pain, and is an excellent counter-irritant; but it often produces very great suffering, produces large and violent pustules which sometimes end in considerable suppuration; and I have sometimes seen them end in a slough. Altogether, the application of tartar emetic is very severe. Now the croton oil produces an eruption much more speedily, — one which is

not attended with such suffering to the patient, and one which is very effectual. The eruption produced by the emetic tartar may be compared with that of violent small pox, but the eruption which is produced by croton oil may be compared with that of violent chicken-pox. The one bears about the same relation to the chicken-pox that the other does to the small-pox. If you take ten drops of croton oil, and rub it over a part steadily, you will generally by two rubbings, get out an eruption; but sometimes three or four are required. Now that which is induced is a rash, that is to say, an extended inflammation of the part, uniform redness, and in the midst of this there are thousands of little vesicles, about as big as a pin's head; two or three may run together and be confluent, and then they will be large. They do not contain clear, but puriform fluid, so that they are something between vesicles and pustules. When they first come out, there is frequently great tingling and smarting, but that soon goes away. In a day or two it all subsides. No ulceration is left, unless by chance the patient should rub the part. The inflammation from this will sometimes extend beyond the part on which friction is made. This is observed when you irritate the skin from any circumstance whatever. Nothing is more common than to see inflammation extend beyond the application. I have seen a cutaneous disease run over the whole body, simply by something irritating being applied to one hand. Thus, croton oil will not only sometimes produce inflammation of the part to which it is immediately applied, but if it be rubbed on the legs, especially, the effect will affect the genitals. You know that tartar emetic, in spite of all the care that can be adopted, will produce pustules on the scrotum, and the rest of the pudenda. I have frequently seen it have this effect when applied to the legs, and even to the abdomen, where every care was taken to prevent the slightest application of the ointment to the parts: even when the application was made to the legs by another person, and when the patient was enjoined not to touch the legs, so that there might be no chance whatever of its affecting the genitals. The same is observed with respect to croton oil. There is no doubt but that many persons will have an affection of the genitals from tartar emetic applied at a distance. No doubt one frequently arises from the patient touching the parts with the finger. But very frequently that is not the source of it, and the genitals will become covered with vesicles when croton oil has not been applied to them at all, and only to the legs. Of course you will ask, does the external application produce purging? I never knew purging to occur in that way. I once remember tartar emetic to have caused nausea, though I do not recollect its occurring more than once; but I never yet have seen any

disturbance of the alimentary canal from the application of croton oil externally. I have never employed it so as to produce ulceration, and I doubt whether it would purge if it were so applied. When you have only applied it once, it does not in general cause irritation, and you have to apply it a second time, and yet I have not seen any internal effect produced by it. Twelve hours have been allowed to pass before a second application has been made of it in many cases, and yet no affection of the bowels has come on. You will find this exceedingly useful in rheumatic pains, and as it operates so very speedily it may be useful in cases when you wish for a rapid irritation of the skin, because, I presume, that if it were rubbed in every two hours instead of every twelve, you might have a rash induced in a very few hours. I never have ordered it to be applied more frequently than night and morning. The speediness with which it takes effect, the briskness of the irritation, the rapid subsidence of it without leaving any ulceration, make it, I think, a very valuable medicine.

There was a man admitted on the 14th of October, both for syphilis and rheumatism. He took mercury with success up to a certain point, but then he had such severe rheumatism, that I was obliged to give him strammonium night and morning, and after this he still had severe pain down his thighs. The croton oil was rubbed on one night and morning, and it entirely removed the disease there from which he had been suffering in spite of the mercury and the other means employed. He continually suffered however in the other thigh, and I then applied the croton oil to that also. The irritation was extensive, and zinc ointment was applied. The man, notwithstanding he had been a great sufferer up to the time of the application of the croton oil, went out perfectly well. It was not myself that employed it externally originally, because it was so used by the gentleman who took a deal of trouble to make it known,— Dr Short. Andral has, still more recently, been employing it in Paris, but I do not know what has been the result. Dr Short was a Surgeon practising in the East Indies, and returned laboring under an affection of the heart, and he told me that rubbing croton oil externally always relieved him. He was anxious that I should give it a trial, for he had been in the habit of using it externally as an irritant among his patients. I have done so, and I think it one of the best external applications that can be employed when you desire brisk and harmless irritation. — *Elliotson's Lectures.*

Mental Alienation. — Its Treatment.

To terminate the history of mental alienation, I must point out the chief features in its treatment. This has, I am happy

to say, undergone a happy revolution in France and some other countries since the time when Pinel directed attention to the improvement of the condition of the insane. At previous epochs, the unhappy maniac was subjected to rigid and severe imprisonment; he was beaten unmercifully, ill fed, ill clad, nay often laden with irons. But at the present day, the visitor to our lunatic asylums is astonished at the happy scene he witnesses. The inmates ramble over extensive grounds; they converse with each other, they pursue the diversions they profess; they almost seem like rational beings. Nor is it in this amelioration that the whole improvement of this revolution of treatment resides. The number of *cures* is also augmented.

The treatment of the insane, then, is to be considered in two points of view, the *medical* and the *hygeienic*. I shall take the first into consideration now, and then notice the second.

Medical Treatment of the Insane. — Bleeding, Cold, Purgatives, Blisters, Actual Cautery, Tonics, Digitalis, Opium, and Mercury; Rotary Machine; Local Applications. Extraordinary Case.

Of medical measures, the first to be considered is the *evacuation of blood*. Before the time of Pinel, authors were much divided about this remedy. He, however, went a little further than others, and stated it to do positive harm. We may nevertheless presume that he was wrong in advancing this as a general assertion. There are indisputably many cases in which emission of blood is very useful. We must not, however, be too liberal in the evacuations. The American physician Rush, an authority, by the way, in these matters, used to bleed with extreme copiousness. I do not, however, think this practice one deserving of imitation. I consider moderate bleeding very useful in certain phases and periods of insanity, and, in certain suitable constitutions of patients, — at the commencement of the disease, for example, or when it is acute and severe, — when the conjunctivæ are injected, the pulse frequent and full, — when, in maniacal females, exacerbations occur at the menstrual period, the secretion being repressed. The effects of bleeding in insanity may be said to be two-fold; first, the arresting the disease at its commencement; secondly the calming and moderating exacerbations during its course. You must be guided in its application by the age, sex and constitution of the patient, and by the nature, gravity, and mode of commencing of the symptoms. These remarks apply to arteriotomy and venesection. As for *leeches*, they are to be preferred in a majority of cases. Cupping and scarification also are of peculiar use in certain cases.

At the same time, *with* sanguineous emissions, or *without*

them, other modes of treatment and remedies may be employed, such as the tepid hip-bath and foot-bath, &c. Formerly it was not unusual to order cold baths, and to compel the patients to stay in them from one to four hours. This practice, however, cannot be approved of. Cold applications to the head have been greatly extolled; these are of different kinds, of which the *douche* holds the first place. The cold douche may be of various kinds; for example, the *aviosoir*, or watering pot, sending out a multitude of fine streams of water with a gentle impulse, or a jet of a single stream of greater volume and velocity, or the shower-bath, consisting of a great volume of water suddenly dashed on the head from a considerable elevation. These various means are, however, much less used now than they used to be. In many cases they were found to do infinite mischief, in others they were perfectly useless. They torment the patient beyond measure, and sometimes drive him to a state of fury. *Cold sponging*, notwithstanding, seems in suitable cases to be a very valuable remedy. Esquirol, for instance, relates a very interesting case of a young man who became suddenly and violently insane, on whom the cold sponging was employed with remarkable success He first became restless, then calm; he was next seized with a rigor, and the pulse became very small. In this state he fell asleep, and while so, a profuse perspiration broke out. He slept for several hours, and then awoke in the full exercise of his reason, which he ever afterwards retained. This is certainly a very striking case. Cold may also be very effectually employed by means of ice, whether in substance or in recent solution. Sponges of iced water, for example, may be applied to the head, or pounded ice itself, wrapped up in some envelope, to prevent it from doing any mechanical injury. It is always better to use a double cap of oiled silk for this purpose, than the pig's bladder usually employed. The latter causes a too partial application of the cold, a circumstance which should be always avoided. Moreover, the patient cannot so easily displace the cap, which may be very firmly adjusted.

There are many other means, too, which require notice; some of them of very ancient application. It having been observed, that in some insane persons the occurrence of spontaneous diarrhœa effected a notable amelioration of the symptoms; the inference was but manifest that it would be judicious to attempt to obtain similar good results by substituting the action of purgatives for the natural process. Accordingly we find at one time these medicines regarded as absolute specifics. My personal experience leads me to believe them to be very useful. They may be employed in either of two ways, namely, in strong doses, and at sufficiently long intervals, or, in gentler proportions, con-

tinued every day for a certain time, always taking care not to carry this irritation so far as to run the risk of a gastroenterite. Of the remedies to be employed, some selection is necessary in the first place, on account of the great difficulty to induce the insane to take medicines of any description. A good way of deceiving them is, by putting *calomel* on their bread and butter, or by giving them *croton oil* in their soup, &c. As for *emetics*, I think they must tend to produce a cerebral congestion, and thus do mischief as a general rule ; but in some cases of chronic madness, where there are no symptoms of high vascular action, they are certainly of occasional utility. In one form of alienation, namely, the *perpetual* mania, vomiting is considered by Esquirol to be almost specific.

Various modes of external irritation have been recommended by several practitioners. For example, *blisters :* these, I confess, I do not like, if it was for no other reason than the extreme difficulty of preventing the patients from using every exertion to remove them. Some irritating ointments have been used with advantage, such as the tartar-emetic ointment, especially where the alienation seems to have proceeded from a metastasis of some cutaneous eruption. The actual cautery too, has had its advocates, and its application to the cranium been advised. I have no hesitation in pronouncing this practice to be excessively bad. At the Bicetre it was found to be followed frequently by desperate symptoms, such as furious delirium ; and it was more than once known to occasion an inflammation of the scalp, which spread to the dura mater. If employed at all, it should be to the nape of the neck. Velentin mentions cases in which this application was advantageous. Its mode of operation, however, admits of some difference of opinion. It may be by the actual revulsion produced, or by the mere fright, the mere emotion excited by the approach of the red-hot instrument. It is at any rate clear that the cautery does no good to the patient whom it does not frighten. But, on the other hand, this patient must be very severely affected, perhaps too much so to receive benefit from any mode of treatment.

Many insane individuals, as you are well aware, fall at length into a state of remarkable asthenia, and exhibit the extreme of muscular weakness. In this form of the disease medicines are still useful, and the strength may be in some cases re-established, as M. Esquirol has found, by the use of bitters, wine, and bark.

After this general glance at the chief methods of rational treatment now adopted, I have to notice some reputed specifics. Digitalis, for example, has been much vaunted in Germany. The medicine was used until it affected the pulse powerfully, in fact, until symptoms of poisoning commenced. The experiments

made with it in France, however, have led to no positive results. Concerning opium there have been different opinions. Esquirol regards it as absolutely hurtful, but there can be no doubt, but that in certain species of alienation it is very advantageous; in cases, for example, which are characterized by restlessness without much increased circulation. There is a case related of a monomaniac, who took opium for the purpose of committing suicide, fell soundly asleep, and awoke rational. The species of acute insanity termed *delirium tremens*, affords another striking example of the beneficial effects of opium in some species of the disease. *Mercury*, again, has been stated by Rush to be of much service, if carried just to the commencement of salivation. He relates an example of cure thus obtained in a woman, who, after her confinement, conceived an insane aversion to the child she had just brought forth. She was subjected to the mercurial treatment, and recovered her reason at the commencement of salivation. She suffered no relapse. Bark and quinine also have been used, but without very obvious benefit, in the cases which seemed to put on an evidently intermittent form.

One of the most remarkable means formerly recommended, was Dansin's *rotatory machine*. This consisted of a frame, so disposed, that the patient's head was placed in the centre, and his feet towards the circumference of a circle, when motion was imparted to the circle, so that a centrifugal impetus was communicated to the circulation of the blood, and to the other fluids of the system. The experiments with this apparatus were not successful.

When menstruation is suppressed in insane females, the interruption of the secretion is sometimes but a concomitant effect of the same cause which produced the alienation; sometimes it is but an accidental complication, and sometimes, again, it is the cause of the insanity. In this case we must, at the suitable periods, apply leeches to the vulva and thighs, use the foot-bath, have aromatic vapors directed against the external parts of the generation, give aloetic pills, &c. This treatment will sometimes do good, but it has more frequently failed, even when practised with the utmost perseverance. In males, the suppression of habitual bleeding from hæmorrhoids has also been supposed to give rise to insanity. The remarks applied to suppressed menstruation may by obvious analogy be extended to this affection also. In the *hallucinations* of various senses it is manifestly necessary to examine the state of the organ affected, and apply our remedies accordingly. Delusions of hearing are very troublesome in some insane persons; and in these cases relief has been occasionally obtained by directing some remedial applications to the ear. Thus in one case of fancied voices, &c. M. Esquirol introduced cotton, charged with a solution of caustic

potash, into the meatus auditorius; inflammation ensued, and the delusion ceased. In other cases the cotton was merely dipped in oil, with similar advantage.

Hygeienic Treatment of the Insane. — Kindness.

It is unnecessary for me to dwell any further on the important changes recently effected in this particular, and to which I alluded at the commencement of this lecture. In all our measures, then, we should endeavour to bring the insane individual under the operation of a suitable social system. The governing principle of this should be founded on the fact, that he is conscious of the difference between right and wrong. You must, therefore, be just to him, temper kindness with firmness, and never ill or unjustly treat him. Thus you will do much towards gaining his confidence, a most important point to be attended to. — *Andral's Lectures.*

Hopital De la Charitè. French Operations.

No idea can be more erroneous, no resolution more absurd, than to send young men to Paris to *learn* their profession. If they stop for a short time they cannot derive benefit; if for a longer time, they do not. We have seen a good deal of the effects of this method of study, as it is called; we have seen them before starting, and after coming back. In not one instance have we witnessed anything like a rational improvement. These persons become Frenchified Englishmen; they learn to smoke and to drink coffee, it is true; if more apt and quick witted, to fence and to gamble; but to practise their profession with credit or advantage they seldom or never do learn in Paris. Now, if anything could be acquired, one would think it were anatomy; yet even in that they are rarely accomplished. From the impossibility of making anatomical preparations in Paris, our English students fall into a habit of dancing a gallopade through a body, and too often are rendered slovenly cutters up, rather than dexterous and neat dissectors. But we will allow that a diligent young man becomes a good anatomist in Paris. Can he also become a good surgeon? We maintain that he cannot. The impressions of his youth, the recollection of what he has seen in England must rise before his mind when he witnesses a totally different method in France. He grows distracted and confused between opposite modes of practice and conflicting opinions; he knows not whether Hunter and Sir Astley Cooper, or Dessault and M. Dupuytren are right, and he returns to his native land to undergo the same process of doubt and difficulty when he sees again the usages of his countrymen. Some persons may regard this as a caricature, but it really is none. Let a young physician or

surgeon complete his *education* here before he goes abroad to hear other precepts and see other practice. He will then derive advantage from the scenes that are presented to him; he will observe, compare, and reason; he will find himself qualified to discriminate the points in which foreigners excel us, and those in which we excel foreigners; he will be informed, not confounded; his opinions will be matured and strengthened by comparison, not disordered and overthrown by contradiction.

These reflections were excited by the perusal of a clinical report from La Charitè, in the Gazette Médicale de Paris. All sensible and well-informed English surgeons have remarked the great mortality after operations in the Parisian hospitals; they have observed with regret that the exclamation of Frère Jacques, 'l'opération est achevée; — Dieu vous garde!' might not inappropriately be attributed to any of the surgeons of Paris at this moment. Our professional cosmopolites may be shocked at this assertion, yet it seems to be acknowledged by many of the French themselves. In the prospectus of a French medical journal we find the following passage.

"La chirurgie Française parait avoir placé le but de tout perfectionnement dans la partie du diagnostic et de l'operation; nulle enguette des indications, nul souci de la therapeutique générale et consécutive; il semble enfin q'on n'ai à agir que sur un corps inerte."

When a journal in France starts into existence with such a declaration, when such is the device upon its banner, what must we think of the state of French surgery, considered as a means of alleviating human misery. If operations, bloody, cruel operations, are looked on with admiration, it can only be by those who regard plague, pestilence, and famine as benefits also. No! operations are our opprobrium, our disgrace, not our proper and legitimate boast; the mere operator is little better than a human butcher by rule. There is too great a taste for the knife at present; — shame to those who encourage it; — wo to those who practise it. Unnecessary operations bring discredit on surgery; unsuccessful ones, even when perfectly justifiable, inspire doubt and repugnance to it in the public mind. Patients who see or hear of their relatives or friends submitting to barbarous and frightful maimings, only that they might live for a month or a week, feel no great relish for the knife, when its use might bring safety and a cure. What a sarcastic, what a damning catalogue of *great* operations performed within these last few years, might a diligent cynic compile for the gratification of the world! But we have done, and we trust that these observations may not be without their effect. —*Med. Chir. Review.*

Case of Tetanus, following a Punctured Wound in the Foot, cured by Division of the Posterior Tibial Nerve. By John Murray, m. d., Assistant Surgeon, Hon. E. I. C. Service.

I was a passenger in the ship *James Pattison*, from England to Calcutta, when, in the channel, three days after leaving Portsmouth, at 10 o'clock A. M. on the 15th August last, the surgeon of the vessel (Mr D. Leslie) came and reported to me that Mr William Pile, one of the midshipmen, æt. fifteen, had trod upon a rusty nail the preceding evening about nine o'clock, which penetrated the left foot, between the metatarsal bones of the great toe and the adjoining one, and that symptoms of locked jaw had made their appearance. The patient had kept his watch after the accident during the night, which was cold, and the wound had been very painful. When he was seen in the morning at eight A. M. he complained of a stiffness about his jaws and throat, which had increased very much since that time. His countenance was anxious, and his lips appeared swollen and rather livid. A poultice to the wound was the only treatment that had been employed. On consultation, the following draught was agreed to be given : — ℞ Pulv. Camphor. ʒ ss. Tinct. Opii. ♏lxx. ; Syrup. simpl. ℥ j. M. s.s.

And as the jaws were nearly closed, and great difficulty found to get them opened to the extent of a quarter of an inch, a piece of wood of this thickness was inserted between the teeth. Half an hour after taking the draught he was visited again, but no beneficial effect had resulted from the opiate. The tetanic symptoms were rather increased, the spasms had partially extended to the muscles of the neck, and the piece of wood was deeply indented by the teeth. The limb was cold, and he said 'it was dead, excepting at the site of the wound, which was painful, and that he had little power of moving it.' His pulse was 120, and what may be called irritable; and his situation seemed to be one of great danger. He was ordered to be carried to one of the best cabins; and after considering all the different modes of treatment that have usually been recommended and employed in tetanus, and finding how undecidedly they were all spoken of as to affording hopes of cure, I proposed to Mr Leslie the division of the posterior tibial nerve (by which the injured part was supplied) as a remedy that held out a good prospect of success, from its cutting off the communication between the source of irritation and the brain, at the same time that it was an operation easily performed, and unattended with danger or deformity. I proposed, also, that the original wound should be dilated and cauterized.

My proposals being agreed to, as soon as the necessary preparations could be made, the operation was performed. A straight incision, an inch and a half in length, was made through the integuments and the aponeurotic fascia, about an inch posteriorly to the malleolus internus, which laid bare the sheath of the vessels; and on dissecting deeper, I easily found the nerve in its usual position. By an aneurism needle I separated and raised the nerve, so that I might divide it with greater facility and expedition. When brought thus into view, it appeared to be so remarkably large, (being nearly twice the usual size) though of the natural color, that a doubt was expressed by Mr Leslie about its really being the nerve. To satisfy him on this point, I requested the patient to extend his foot, which he did with difficulty, and in an imperfect manner, as he said he had nearly lost the power of moving it; but he did it sufficiently to show the difference between the nerve and a tendon, as it did not become tense in this action. The nerve was then rapidly divided by a single cut of the scalpel, which gave acute pain; and although he could not articulate distinctly before, on account of the closed state of his jaws, *he immediately opened his mouth with an exclamation*; and, on looking at his countenance, I was astonished at the striking improvement in it. I asked him how he felt, and he said 'he was already much better, and that his leg had come to life again.' He expressed at the same time a great inclination to go to stool. There was scarcely any hemorrhage from the wound, which was then simply dressed by bringing the edges together by adhesive plaster, with lint, and a bandage over it. We next dilated the original wound made by the rusty nail, which also gave (rather unexpectedly) great pain, but did not cauterize it as proposed, as the symptoms had already yielded. A poultice, sprinkled with laudanum, was applied over it. His bowels were then copiously moved; and on being placed in bed, without any additional opiate, he fell into a sound sleep, which lasted without interruption for four hours, and he awoke very much relieved from all his former disagreeable symptoms. His jaws still, however, felt rather stiff, but by a strong exertion he could open them nearly to the full extent. The excessive pain in the original wound, of which he complained previously to the operation, had now entirely ceased, and the motion of the limb was quite restored. It was found, on examination, that the heel and sole of the foot were quite benumbed, but the sense of feeling in the upper part of the foot was not affected. At night he had the following powder: — ℞. Pulv. Opii, gr. ij.; Pulv. Camphoræ, ℈j. M.

Aug. 16th. Slept indifferently during the night; complained still of the stiffness of the jaws and neck, and to a greater de-

gree than the preceding evening. He also had pain and tightness across the chest, with headache. I was very sea-sick, and in bed by this time, and unable to make more minute inquiries about the symptoms, but I recommended venesection and another opiate to be given. He was bled accordingly to the extent of twelve ounces, which induced syncope, and gave great relief; and he had the same opiate as last night, after which he slept a good deal during the day. His bowels were naturally opened, and the same opiate was repeated at bed time.

17th. The opiate of last night appeared to produce considerable excitement for some time after it was administered, but this was followed by a sound sleep. The stiffness of the jaws and neck, and tightness across the chest, have nearly altogether disappeared. He complains of a great deal of numbness in the leg and foot. Pulse eighty, and natural; tongue clean; bowels regular. — Rep. Pulv. h. s.

18th. The tetanic symptoms have entirely disappeared; the numbness of the leg is gone off, and he complains of pain in it, extending from the knee downwards. The parts in the site of the operation are very tender, and extremely painful on pressure. The original wound continues to be poulticed, and looks healthy. The opiate powder to be continued in half the former quantity.

From this date no unfavorable symptoms occurred. The wound in the sole of the foot healed in a few days; that of the operation did not unite by the first intention, and did not heal till about a fortnight after. The sense of feeling began to return in the sole of the foot on the third day after the operation, and is now natural in most places; but there is still, up to this date, an entire want of sensation in the little toe and heel. He complained for some time of not being able to perform the action of separating the toes so easily as formerly, but that no longer exists. He finds no inconvenience in walking, or in the performance of all his regular duties: in fact, he is quite well.

Med. Gazette.